CITY OF LONG BEACH
COMMERCIAL DEVELOPMENT LINKAGE FEE ANALYSIS

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I. INTRODUCTION AND EXECUTIVE SUMMARY

A. Introduction

The City of Long Beach retained David Paul Rosen & Associates (DRA) to prepare a nexus study examining the legality and basis for establishing a rational nexus between non-residential development and the need for affordable housing in the City of Long Beach. The City is experiencing a severe housing crisis, particularly for low and moderate income households. This crisis is evidenced by record low vacancy rates and escalation of housing costs at rates well above inflation and the increase in household income. To the extent that new non-residential development increases demand for housing and exacerbates this housing crisis, the City has a strong public interest in causing new housing to be developed to meet this additional demand.

In addition to market rate housing, future employment growth will generate demand for housing affordable to lower and moderate income workers. Other cities in California, such as San Diego, Sacramento and San Francisco, have established commercial development linkage fees, also known as nexus fees, to generate revenues for affordable housing development. Through payment of these fees, non-residential developers mitigate at least a portion of the impact of their developments on the housing market. The study analyzes the supportable fee in Long Beach based on the nexus between non-residential development and affordable housing.

The remaining two sections of this Chapter describe the nexus concept, the study methodology, and key findings of the analysis.

Chapter II provides an overview of demographic and economic trends and conditions in the six-county Southern California Association of Governments (SCAG) area setting the context for the local nexus between non-residential development and need for affordable housing in Long Beach.

Chapter III summarizes a survey of nexus fees on commercial/industrial development in the state.

Chapter IV describes the methodology, assumptions and findings of the nexus analysis. The nexus analysis estimates the number of low and moderate income households associated with development of office, warehouse/distribution, retail, and hotel development in Long Beach. It is based on the demographic and economic characteristics of employees expected to work in those developments.

Chapter V estimates the maximum supportable nexus fee on commercial/industrial development in Long Beach. The fee estimate is based on the results of the nexus analysis from Chapter IV and an affordability gap analysis of the difference between housing development costs in Long Beach and the amount low and moderate income residents can afford to pay for housing.

Chapter VI summarizes an evaluation of the potential economic impacts of a commercial/industrial nexus fee in Long Beach on future commercial/industrial

development in Long Beach. The analysis evaluates the potential impact of alternative fee levels on rents and rates of return on investor equity for office, warehouse/distribution, retail and hotel uses. The analysis also reviews development impact fees on commercial/industrial development in selected Southern California communities, in comparison with Long Beach.

B. The Nexus Requirement

In order to establish a nexus fee on commercial/industrial development to increase the production of affordable housing, the City of Long Beach must demonstrate that there is a reasonable relationship between non-residential construction and the need for housing affordable to low and moderate income groups.

In essence, the legal requirement is that a local government charging a fee make some affirmative showing that: (1) those who must pay the fee are contributing to the problem which the fee will address; and (2) the amount of the fee is justified by the magnitude of the fee-payer's contribution to the problem.

Fees on development in California are subject to two overlapping sets of legal requirements, constitutional requirements of nexus and "rough proportionality" under the U. S. Supreme Court cases of Nollan v. California Coastal Commission (1987) 483 U. S. 825 and Dolan v. City of Tigard (1994) 512 U. S. 374, and California's statutory "reasonable relationship" requirements under California Government Code sections 66000-66010. Although legally distinct, these two standards are substantively similar and in practice a development fee which satisfies one will almost certainly satisfy both. The California Supreme Court in Ehrlich v. City of Culver City (1996) 12 Cal. 4th 854, 867 concluded that the two standards "for all practical purposes, have merged."

The Supreme Court's decision on the Nollan v. California Coastal Commission imposed a requirement that a "rational nexus" be demonstrated between the impact associated with an action and the remedy being required or, in the case of a fee, the use of the funds being extracted from the developer.

To implement the Nollan decision in California, the State Legislature passed A.B. 1600, which requires local jurisdictions to establish a reasonable relationship between a development project or class of development project, and the public improvement for which the developer fee is charged, and to segregate and account for the money separately from general fund monies.

There is currently little dispute that commercial development, by increasing employment, also increases the demand for housing for the added employees, and that market housing development, with no public assistance, will not provide enough additional housing for the additional lower-earning employees.

C. Nexus Methodology

The numerical nexus analysis in this report identifies the number of households of low and moderate income levels associated with the employees that work in a building of a given size and land use type in Long Beach, and calculates the development impact fee required to make housing affordable to those households.

This analysis determines the number of employee households in each of the following three income categories:

Very low income:	those earning less than 50% of area median income;
Low income:	those earning between 50% and 80% of area median income;
Moderate income:	those earning between 80% and 120% of area median income.

We examined the development of 100,000 square foot building modules of four building types. These building types were selected to represent a majority of the development pipeline in Long Beach.

Office;
"Big Box" Retail;
Community Retail;
Light Manufacturing; and
Hotel.

The nexus analysis employs a tested nexus and gap methodology that has proven acceptable to the courts. The economic analysis uses a conservative approach to understate the legally supportable fee amount. Therefore, the housing impacts are likely even greater than indicated in the analysis. Using conservative assumptions, justified fee amounts are still above those likely to be considered reasonable and sustainable in the market.

The nexus economic analysis methodology employs the following seven steps. A detailed discussion of the assumptions used in the nexus analysis is contained in Chapter IV.

1. Estimate total new employees;

2. Estimate new employees living in the city of Long Beach;

3. Adjust for potential future increase in labor force participation;

4. Estimate the number of new households represented by the number of new employees;

5. Distribute households by occupational groupings for each land use;

6. Estimate employee households meeting very low, low, and moderate income limits, adjusted for household size; and

7. Adjust for multiple earner households.

The results of these seven steps is the estimated number of households by land use living in Long Beach and qualifying as very low, low or moderate income. DRA prepared a housing affordability gap analysis to calculate the development impact fee required to make housing affordable to these new Long Beach households. The affordability gap analysis calculates the capital subsidy required to develop housing affordable to families at specified income levels.

The affordability gap was estimated for three prototypical housing developments in Long Beach: one renter-occupied and two owner-occupied. For rental housing, the gap analysis calculates the difference between total development costs and the conventional mortgage supportable by net operating income from affordable rents. For owners, the gap is the difference between development costs and the supportable mortgage plus the buyer's downpayment.

The results of the gap analysis were used to determine the fee amount by land use that would be required to develop housing affordable to the very low, low and moderate income households who will need to find housing in Long Beach in connection with new non-residential development in the City.

D. Summary of Findings

1. Justifiable Nexus Fee

The economic analysis estimated the following supportable fees under consistently conservative assumptions:

Household Income Category	Supportable Nexus Fee Per Building Square Foot				
	Office	Light Manuf.	"Big Box" Retail	Commun. Retail	Hotel
Very Low	$11.84	$8.88	$7.40	$13.32	$7.40
Low	$6.40	$5.12	$6.40	$12.80	$2.56
Moderate	$5.40	$1.20	$1.20	$3.00	$0.60
Total	$23.64	$15.20	$15.00	$29.12	$10.56

2. Revenue Projections

DRA projected linkage fee revenues at alternative fee levels based on the current pipeline of major development projects in Long Beach. These projections are based on illustrative fee levels ranging from $2.00 per square foot to $10.00 per square foot.

The projections show potential revenues from major projects in the major stages of the planning approval process in Long Beach: preliminary and entitlements granted. We have excluded projects that are already under construction.

Combined total fees from all major projects on the most recent major projects list that are not under construction equal $3 million to $16 million at fees of $2.00 per square foot to $10.00 per square foot, respectively. Clearly, a housing linkage fee is potentially a significant source of funds to help mitigate demand for affordable housing associated with job growth, even at fee levels substantially below those justified by the economic analysis.

3. Economic Impact of Nexus Fees

A number of communities in California have adopted linkage fees. Our interviews with developers indicated that fees in at least nine jurisdictions, some of which have been in place for more than fifteen years and through one or two full business cycles, have had no discernible impact on development. One reason may be that fee levels are relatively small as a percentage of development costs and rents, and therefore do not affect developers' decisions to build or not build, which are based on the strength of market demand.

Nexus fees should be assessed in combination with all other fees in the City of Long Beach and compared with total development fees in other locations in the market area, along with other competitive factors. DRA also evaluated the potential impact on developers, investors and landowners of a potential nexus fee.

a. Regional Survey of Development Impact Fees

DRA assessed the potential economic impact of a linkage fee in Long Beach at illustrative fee levels on each of the land uses analyzed. A new nexus fee on non-residential development would result in an increase in rents, a decrease in the rate of return to equity investors, or a decrease in land value. Presumably property owners are already charging the maximum rents they can in the marketplace, so rents are unlikely to increase because of an additional development fee. Investor return may decline for committed projects but investors are likely to invest elsewhere rather than accept significant reductions in return. The most immediate effect is likely to be a decrease in the land value. This decrease can be analyzed through a land residual analysis methodology. DRA also examines the increase in rent and reduction in investor return required to accommodate the fee.

b. Land Residual Analyses

A land residual analysis methodology calculates the value attributed to land from proposed development on that site. It is commonly used by real estate developers and investors to evaluate development financial feasibility and select among alternative uses for a piece of property.

The land residual methodology calculates the value of a development based on its income potential and subtracts the costs of development and developer profit to yield the underlying value of the land. When evaluating alternative land uses, the alternative that generates the highest value to a site is considered its highest and best use. An alternative that generates a value to the land that is negative is not financially feasible.

DRA calculated net operating income from each land use prototype based on estimated market rents. Net operating income is capitalized at an assumed capitalization rate of 8.0 percent (based on recent property sales comps) to determine the value of the developed property. The capitalization rate is the ratio of net operating income to project fair market value, or sales price, exhibited in the market and reflects the rate of return required by investors in rental property. Total development costs are then subtracted from the capitalized value to yield the estimated residual land value.

DRA applied a land residual analysis to each of the five land use prototypes using assumed market rents and operating costs. The residual land value was first calculated without a nexus fee to determine the basic financial feasibility of the prototype given the economic assumptions employed. The land residual analysis was then calculated assuming different levels of nexus fees to evaluate the effect of these requirements on land values. The resulting residual land values at various assumed levels of a nexus fee are summarized below

Assumed Nexus Fee Per Bldg. SF	Residual Land Value Per SF Site Area				
	Office	Light Manuf.	"Big Box" Retail	Commun. Retail	Hotel
No Fee	$43	$23	$21	$38	$29
$2.00	$40	$22	$20	$34	$28
$4.00	$36	$22	$20	$31	$28
$6.00	$33	$21	$19	$28	$27
$8.00	$29	$21	$19	$24	$27
$10.00	$26	$20	$18	$21	$26
$15.00	$18	$19	$17	$12	$25
$20.00	$9	$18	$16	$4	$24

c. Rent and Return Analysis

DRA calculated the increase in rents, or decrease in the rate of return on investor equity, required to finance the fee at current market terms for both debt and equity financing. By applying the average financing cost to the fee at illustrative fee levels, we determine the rent increase necessary to keep returns to developers and investors constant. Alternatively, we calculate the decrease in the rate of return on equity to investors assuming rents remain constant. The rate of return on equity at various levels of an assumed nexus fee is summarized below.

Assumed Nexus Fee Per Bldg. SF	Rate of Return on Equity				
	Office	Light Manuf.	"Big Box" Retail	Commun. Retail	Hotel
No Fee	8.50%	9.00%	9.00%	9.00%	9.00%
$2.00	8.33%	8.65%	8.73%	8.79%	8.66%
$4.00	8.16%	8.33%	8.47%	8.59%	8.34%
$6.00	8.00%	8.04%	8.23%	8.41%	8.05%
$8.00	7.84%	7.76%	8.00%	8.22%	7.78%
$10.00	7.70%	7.50%	7.78%	8.05%	7.52%
$15.00	7.35%	6.92%	7.29%	7.65%	6.95%
$20.00	7.03%	6.43%	6.86%	7.28%	6.46%

II. DEMOGRAPHIC AND ECONOMIC OVERVIEW

Increases in employment in the Los Angeles area will draw new people to live in the region and will generate demand for housing at all income levels. The lack of housing, particularly affordable housing, is a constraint on area growth. It creates a policy problem the City of Long Beach is trying to address with a nexus fee. In the absence of efforts to increase the supply of affordable housing, higher paid workers will move into the area and will displace lower income workers.

This section summarizes recent demographic trends and projections reported by the Southern California Association of Governments (SCAG) and describes the relationship between employment and housing, setting the context for the linkage analysis.

SCAG is required by state mandate to prepare regional economic and demographic forecasts for the six-county Southern California area every two years. The most recent edition, "State of the Region 2000", summarizes recent demographic and economic trends, and provides current projections of the population, labor force, households, income and jobs for the period 2010 to 2025.

The Southern California economy throughout 1999 continued the rebound that began in 1993 following the economic recession of the early 1990's. The SCAG region added 171,000 new jobs in 1999, an increase of 2.6 percent over the previous year. Los Angeles County added more than 80,000 new jobs in 1999, a 2.0 percent increase over 1998. Nevertheless, at the end of the 1990's, Los Angeles County still had not replaced all of the jobs it lost during the recession, but ended the decade with 112,000 (2.7 percent) fewer jobs than it had in 1990. Employment growth in Los Angeles County has been at a slower rate than for the other counties in the region. However, since the county accounts for over 60 percent of the region's jobs, even a small percentage increase represents a significant number of new jobs for Southern California.

In 1999, unemployment rates in most counties in Southern California fell either to record lows or, at least, to the lowest levels in decades. The unemployment rate for Los Angeles County was 6.0 percent for 1999 and 5.7 percent at year-end, the lowest since July, 1990.

Although there is optimism about the improved economy, there are also concerns. A 1999 report by the non-profit California Budget Project notes that a family of four with two working parents needs at least $44,700 to make ends meet in Los Angeles County. The hourly wage needed to support the basic family budget is two to three times the state's minimum wage of $5.75 in 1999.

Further, SCAG analysis indicates that job growth has been accompanied by a decline in median annual earnings. This has been accompanied by growth in the percentage of workers in the lowest earning categories, suggesting that there are relatively fewer opportunities for upward mobility. The SCAG report concludes that there is a growing earnings disparity in Southern California. The report recommends addressing the low level of education of many workers, through on-the-job training and education.

Table 1 summarizes trends and projections in population, households, and employment in the City of Long Beach from 1990 through 2025. The City's total population increased 7.5 percent over the past decade, from 1990 through 2000. The number of households increased more slowly, at 2.6 percent, accompanied by an increase in average household size. The City experienced a 3.9 percent reduction in employment over this time period, following the pattern in Los Angeles County as a whole. Based on SCAG projections, the City is expected to experience a 16.5 percent increase in population between 2000 and 2025. The number of households is projected to increase 22.0 percent over the same time period. Employment is projected to increase 19.2 percent.

Table 1
POPULATION, HOUSEHOLD AND EMPLOYMENT TRENDS AND PROJECTIONS
CITY OF LONG BEACH
1990 to 2025

	1990	2000	2010	2025	% Change 90-00	% Change 00-25
Total Population	429,433	461,522	490,400	537,700	7.5%	16.5%
Household Population	415,216	451,341	N/A	N/A	8.7%	N/A
Households	158,975	163,088	171,400	199,000	2.6%	22.0%
Persons/HH	2.61	2.77	N/A	N/A	6.1%	N/A
Employment	197,118	189,487	207,500	225,900	(3.9%)	19.2%

Source: 1990 and 2000 U.S. Census; Southern California Association of Governments; David Paul Rosen & Associates.

Table 2 presents projected population for Los Angeles County by SCAG subarea for the 2010 through 2025 period. Population in the County is expected to increase 14.4 percent over the 15-year period. Population in the City of Long Beach is expected to increase 9.6 percent over the same time period.

Table 3 shows projected household growth over the 2010 through 2025 period. The number of households is projected to increase 19.6 percent in the County and 16.1 percent in Long Beach.

Table 4 shows projected employment growth over the 2010 through 2025 period. Employment is projected to increase 8.2 percent in the County and 8.9 percent in Long Beach.

Table 2
PROJECTED POPULATION
LOS ANGELES COUNTY
BY SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS SUBAREA
2010 to 2025

SCAG Subarea	2010	2015	2025	Change 2010-2015	Change 2015-2025
North L.A. Co.[1]	786,400	912,400	1,259,900	126,000	347,500
L.A. City[2]	4,210,700	4,387,800	4,876,500	177,100	488,700
Arroyo Verdugo[3]	438,700	449,900	480,900	11,200	31,000
San Gabriel Valley[4]	1,951,800	2,002,600	2,141,200	50,800	138,600
Westside Cities[5]	249,100	250,600	254,700	1,500	4,100
South Bay Cities[6]	910,300	913,900	924,300	3,600	10,400
City of Long Beach[7]	**490,400**	**503,000**	**537,700**	**12,600**	**34,700**
Balance of Gateway Cities[8]	1,658,400	1,687,400	1,766,300	29,000	78,900
Las Virgenes/ Malibu[9]	88,800	91,200	98,100	2,400	6,900
TOTAL L.A. COUNTY	**10,784,600**	**11,198,800**	**12,339,600**	**414,200**	**1,140,800**

[1]Includes Lancaster, Palmdale, Santa Clarita and unincorporated county area.
[2]Includes City of Los Angeles and unincorporated county area.
[3]Includes Burbank, Glendale, La Canada Flintridge and unincorporated county area.
[4]Includes Alhambra, Arcadia, Azusa, Baldwin Park, Bradbury, Claremont, Covina, Diamond Bar, Duarte, El Monte, Glendora, Industry, Irwindale, La Puente, La Verne, Monrovia, Montebello, Monterey Park, Pasadena, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, Temple City, Walnut, West Covina and unincorporated county area.
[5]Includes Beverly Hills, Culver City, Santa Monica, West Hollywood and unincorporated county area.
[6]Includes Carson, El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Lawndale, Lomita, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Torrance and unincorporated county area.
[7]The City of Long Beach is located in the Gateway Cities subarea as defined by SCAG.
[8]Includes Artesia, Avalon, Bell, Bellflower, Bell Gardens, Cerritos, Commerce, Compton, Cudahy, Downey, Hawaiian Gardens, Huntington Gardens, Huntington Park, La Habra Heights, Lakewood, La Mirada, Lynwood, Maywood, Norwalk, Paramount, Pico Rivera, Sante Fe Springs, Signal Hill, South Gate, Vernon, Whittier and unincorporated county area.
[9]Includes Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village and unincorporated county area.

SOURCE: Southern California Association of Governments.

Table 3
PROJECTED HOUSEHOLDS
LOS ANGELES COUNTY
BY SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS SUBAREA
2010 to 2025

SCAG Subarea	2010	2015	2025	Change 2010-2015	Change 2015-2025
North L.A. Co.[1]	264,900	319,800	442,800	54,900	123,000
L.A. City[2]	1,417,700	1,513,000	1,769,500	95,300	256,500
Arroyo Verdugo[3]	158,100	163,800	180,100	5,700	16,300
San Gabriel Valley[4]	550,900	568,000	606,200	17,100	38,200
Westside Cities[5]	117,400	118,700	121,000	1,300	2,300
South Bay Cities[6]	305,500	310,300	321,200	4,800	10,900
City of Long Beach[7]	**171,400**	**180,400**	**199,000**	**9,000**	**18,600**
Balance of Gateway Cities[8]	426,500	431,400	442,200	4,900	10,800
Las Virgenes/ Malibu[9]	31,600	32,800	36,900	1,200	4,100
TOTAL L.A. COUNTY	**3,444,000**	**3,638,200**	**4,118,900**	**194,200**	**480,700**

[1]Includes Lancaster, Palmdale, Santa Clarita and unincorporated county area.
[2]Includes City of Los Angeles and unincorporated county area.
[3]Includes Burbank, Glendale, La Canada Flintridge and unincorporated county area.
[4]Includes Alhambra, Arcadia, Azusa, Baldwin Park, Bradbury, Claremont, Covina, Diamond Bar, Duarte, El Monte, Glendora, Industry, Irwindale, La Puente, La Verne, Monrovia, Montebello, Monterey Park, Pasadena, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, Temple City, Walnut, West Covina and unincorporated county area.
[5]Includes Beverly Hills, Culver City, Santa Monica, West Hollywood and unincorporated county area.
[6]Includes Carson, El Segundo, Gardena, Hawthorne, Hermosa Beach, Inglewood, Lawndale, Lomita, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Torrance and unincorporated county area.
[7]The City of Long Beach is located in the Gateway Cities subarea as defined by SCAG.
[8]Includes Artesia, Avalon, Bell, Bellflower, Bell Gardens, Cerritos, Commerce, Compton, Cudahy, Downey, Hawaiian Gardens, Huntington Gardens, Huntington Park, La Habra Heights, Lakewood, La Mirada, Lynwood, Maywood, Norwalk, Paramount, Pico Rivera, Sante Fe Springs, Signal Hill, South Gate, Vernon, Whittier and unincorporated county area.
[9]Includes Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village and unincorporated county area.

SOURCE: Southern California Association of Governments.

Table 4
PROJECTED EMPLOYMENT
LOS ANGELES COUNTY
BY SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS SUBAREA
2010 to 2025

SCAG Subarea	2010	2015	2025	Change 2010-2015	Change 2015-2025
North L.A. Co.[1]	250,100	268,800	304,300	18,700	35,500
L.A. City[2]	1,931,000	1,975,800	2,060,100	44,800	84,300
Arroyo Verdugo[3]	241,800	250,900	268,200	9,100	17,300
San Gabriel Valley[4]	787,400	807,200	845,400	19,800	38,200
Westside Cities[5]	254,000	259,300	269,300	5,300	10,000
South Bay Cities[6]	475,700	487,800	510,600	12,100	22,800
City of Long Beach[7]	**207,500**	**213,900**	**225,900**	**6,400**	**12,000**
Balance of Gateway Cities[8]	700,200	721,700	762,200	21,500	40,500
Las Virgenes/ Malibu[9]	41,800	42,900	45,200	1,100	2,300
TOTAL L.A. COUNTY	**4,889,500**	**5,028,300**	**5,291,200**	**138,800**	**262,900**

[1]Includes Lancaster, Palmdale, Santa Clarita and unincorporated county area.
[2]Includes City of Los Angeles and unincorporated county area.
[3]Includes Burbank, Glendale, La Canada Flintridge and unincorporated county area.
[4]Includes Alhambra, Arcadia, Azusa, Baldwin Park, Bradbury, Claremont, Covina, Diamond Bar, Duarte, El Monte, Glendora, Industry, Irwindale, La Puente, La Verne, Monrovia, Montebello, Monterey Park, Pasadena, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, South El Monte, South Pasadena, Temple City, Walnut, West Covina and unincorporated county area.
[5]Includes Beverly Hills, Culver City, Santa Monica, West Hollywood and unincorporated county area.
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[9]Includes Agoura Hills, Calabasas, Hidden Hills, Malibu, Westlake Village and unincorporated county area.

SOURCE: Southern California Association of Governments.

III. STATEWIDE SURVEY OF COMMERCIAL DEVELOPMENT LINKAGE FEES

An increasing number of communities in California have adopted established commercial development linkage fees to generate revenues for affordable housing development. Through payment of these fees, non-residential developers mitigate at least a portion of the impact of their developments on the housing market.

David Paul Rosen & Associates (DRA) surveyed cities in California with commercial linkage fee ordinances. DRA surveyed the following cities' ordinances:

- San Diego
- Santa Monica
- San Francisco
- Oakland
- Sacramento
- Berkeley
- Menlo Park (San Mateo County)
- Alameda
- Corte Madera (Marin County)
- Sunnyvale
- Palo Alto
- Pleasanton
- Mountain View (San Mateo County)
- Cupertino (Santa Clara County)

The survey indicates that some of the largest cities in the state – San Diego, San Francisco, Oakland, and Sacramento – have adopted commercial linkage fees. Many cities adopted ordinances several years ago. San Francisco adopted its ordinance in 1985, although San Francisco established commercial linkage fees as a policy in 1981. San Diego adopted its ordinance in 1990 and revised the ordinance in 1996. Sunnyvale adopted its ordinance in 1984; Sacramento (City and County) established its ordinance in 1989, although collection of fees did not begin until 1991.

Table 5 summarizes the survey of commercial development linkage fees. The cities that have collected the most funds from commercial linkage fees are San Diego, San Francisco, and Sacramento. Since 1990, over $33 million has been raised for affordable housing in San Diego. In San Francisco, the ordinance has raised over $40 million since inception in 1980 (according to a survey conducted by the Boston Redevelopment Authority). Sacramento City and County raised over $26 million since their commercial linkage ordinance was passed in 1989.

Table 5
SURVEY OF CITIES IN CALIFORNIA
WITH COMMERCIAL LINKAGE FEE ORDINANCES

February 2003

CITY	YEAR EST.	DEVELOPMENT TYPE/FEE	THRESHOLDS/ EXEMPTIONS/ CAPS	TIMING OF PAYMENT	REVENUES	TARGETED USE OF FUNDS
San Diego	1990, rev. in 1996	• Office space, $1.06/sf • Hotel, $0.64/sf • Res. and dev., $0.80/sf • Retail, $0.64/sf • Manufacturing, $0.64/sf • Warehouse, $0.27/sf	Exempts residential hotels; other variances granted based on special circumstances, project feasibility, financial hardship, and alternative means of compliance	• Paid at issuance of building permit	Since inception, over $33 million	San Diego Housing Trust Fund, targeted to assist persons at 80 percent of AMI or below
Santa Monica	1986	• Applies only to general office development. • Approximately $3.84/sf for the first 15,000 sf of net rentable space, approximately $8.53/sf for the remainder, adjusted for CPI annually. • Developer can construct affordable housing units and park space. However, each housing unit is valued at approximately $51,300, adjusted for CPI.	15,000 sf exemption for new construction, 10,000 sf exemption for additions	• 25% at C.O. • 25% at the three anniversaries thereafter. • Agency requires irrevocable letters of credit to back the payment obligations.	Estimated at over $5 million (by City of Santa Monica staff)	45% toward low and moderate income housing, 45% toward Parks Mitigation Fund, remaining 10% to go toward either or both uses.

Table 5 (Continued)
SURVEY OF CITIES IN CALIFORNIA
WITH COMMERCIAL LINKAGE FEE ORDINANCES

February 2003

CITY	YEAR EST.	DEVELOPMENT TYPE/FEE	THRESHOLDS/ EXEMPTIONS/ CAPS	TIMING OF PAYMENT	REVENUES	TARGETED USE OF FUNDS
San Francisco	1981, est. as policy; 1985, as ordinance	• Office space, $14.96/sf • Entertainment, $13.95/sf • Hotel, $11.21/sf • Research and development, 9.97/sf • Retail, $13.95/sf	25,000 sf exemption	• paid at issuance of building permit	Over $40 million (estimate from study by Boston Redevelopment Authority).	All funds go to the Affordable Housing Fund
Oakland	2002; goes into effect in 2006	• Office space, $4.00/sf • Warehouse/distribution, $4.00/sf	25,000 sf exemption	• 25% paid at issuance of building permit • 50% paid at issuance of temporary certificate of occupancy • 25% paid 18 mos. after TCO issuance	Not applicable	All funds go to the Affordable Housing Trust Fund

Table 5 (Continued)
SURVEY OF CITIES IN CALIFORNIA
WITH COMMERCIAL LINKAGE FEE ORDINANCES

February 2003

CITY	YEAR EST.	DEVELOPMENT TYPE/FEE	THRESHOLDS/ EXEMPTIONS/ CAPS	TIMING OF PAYMENT	REVENUES	TARGETED USE OF FUNDS
Sacramento	1989; collections started in 1991	• Office space, $0.99/sf • Hotel, $0.94/sf • Res. and dev., $0.84/sf • Commercial, $0.79/sf • Manufacturing, $0.62/sf • Warehouse/Office, $0.36/sf • Warehouse, $0.27/sf	Developers can apply for variances if there are special circumstances, the project is no longer feasible, or a specific and substantial financial hardship would occur without the variance.	• paid at issuance of building permit	Over $11 million in the City; Over $15 million in the County	City – targeted to persons at 50% and 80% of AMI County – targeted to persons at 50% of AMI
Berkeley	1988	• Office space, $5.00/sf • Retail, $5.00/sf • Industrial, $2.50/sf Fees can be negotiated if economic analysis demonstrates that fees render project infeasible.	Office, retail, industrial, other commercial, 7,500 sf	Three payments: • Before issuance of permit • Before issuance of C.O. • One year after C.O.	Since 1988, over $2 million has been collected.	20% of these fees go toward child care operating subsidies (since 1993).

Table 5 (Continued)
SURVEY OF CITIES IN CALIFORNIA
WITH COMMERCIAL LINKAGE FEE ORDINANCES

February 2003

CITY	YEAR EST.	DEVELOPMENT TYPE/FEE	THRESHOLDS/ EXEMPTIONS/ CAPS	TIMING OF PAYMENT	REVENUES	TARGETED USE OF FUNDS
Menlo Park	1987 est. policy, revised in 2001	• $6.07/sf for other commercial development • $11.15/sf for office and research and development Fee adjusted annually based on five year moving average of price increase of new homes sold in San Mateo County	• 10,000 sf exemption; alteration must exceed 50% of replacement cost	• Prior to issuance of building permit		Fees go into the "Below Market Rate Reserve".
Alameda	1989, rev. in 2001	• $3.45/sf for office • $1.75/sf for retail • $0.60/sf for new manufacturing/warehouse • $885/room, hotel/motel Adjusts annually based on increases in Engineering News Record cost index	• Any publicly-owned development	• Prior to issuance of building permit		Fees go toward expanding affordable housing opportunities to low- and moderate-income households.
Corte Madera	2001	• Office space, $4.79/sf • Health club/recreation, $2.00/sf • Light industrial, $2.79/sf • Research and development, $3.20/sf • Retail, $8.38/sf • Hotel, $1.20/sf • Warehouse, $0.40/sf • Commercial services, $1.20/sf • Restaurant, $4.39/sf • Training facility/school, $2.39/sf		• paid at issuance of building permit		Funds go to the Affordable Housing Fund to support the development of housing for very low and low income persons.

Table 5 (Continued)
SURVEY OF CITIES IN CALIFORNIA
WITH COMMERCIAL LINKAGE FEE ORDINANCES

February 2003

CITY	YEAR EST.	DEVELOPMENT TYPE/FEE	THRESHOLDS/ EXEMPTIONS/ CAPS	TIMING OF PAYMENT	REVENUES	TARGETED USE OF FUNDS
Sunnyvale	1984	• $7.19/sf, new industrial development	• Limited to new industrial development. Fee charged only if the development exceeds 35% floor area ratio or the ratio applicable to the specific zoning district with employee-generating space. Cafeterias, meeting rooms, warehousing and assembly are excluded from the calculation.	• Prior to issuance of building permit		Funds go toward funding of low and moderate income housing

Table 5 (Continued)
SURVEY OF CITIES IN CALIFORNIA
WITH COMMERCIAL LINKAGE FEE ORDINANCES

February 2003

CITY	YEAR EST.	DEVELOPMENT TYPE/FEE	THRESHOLDS/ EXEMPTIONS/ CAPS	TIMING OF PAYMENT	REVENUES	TARGETED USE OF FUNDS
Palo Alto	1984, revised in 2002	• Commercial uses, $15.00/sf	Currently, no exemptions. However, City Council is considering exemptions for commercial spaces below 1,500 sf zoned for retail, restaurants, personal services, and automotive.	• 100% paid at issuance of building permit	Since inception, approximately $7 million	Ordinance states that funds go toward housing for "low, moderate, middle" income persons. In practice, most funds go toward housing for very low income persons.
Pleasanton	2000	• Commercial uses, $0.54/sf	Fee reduction for certain types of uses (subject to approval by the City Council) if it can be demonstrated that the use will generate substantially fewer workers.	• Paid at issuance of building permit	Since inception of commercial linkage fee policy, approximately $11 million in both inclusionary housing in-lieu fees and commercial linkage fees collected.	Ordinance states that funds go toward the development of housing for "very low, low, and moderate income" households.

Table 5 (Continued)
SURVEY OF CITIES IN CALIFORNIA
WITH COMMERCIAL LINKAGE FEE ORDINANCES

February 2003

CITY	YEAR EST.	DEVELOPMENT TYPE/FEE	THRESHOLDS/ EXEMPTIONS/ CAPS	TIMING OF PAYMENT	REVENUES	TARGETED USE OF FUNDS
Mountain View	2001	• Office, $3.00/sf for 1sf to 10,000 sf, $6.00/sf above 10,000 sf • High tech/industrial, $3.00/sf for 1sf to 10,000 sf, $6.00/sf above 10,000 sf • Hotel, $1.00/sf for 1sf to 25,000 sf, $2.00/sf above 25,000 sf • Retail & entertainment, $1.00/sf for 1sf to 25,000 sf, $2.00/sf above 25,000 sf	None – however, fees are lower for smaller developments	• Paid at issuance of building permit		Funds deposited in housing fund. Funds used to increase and improve the supply of housing affordable to very low, low and moderate income households.
Cupertino	1993	• Office/industrial, $2.17/sf	None	• Paid at issuance of building permit		Revenues are used for affordable housing

Other California cities with commercial linkage fees include Napa, Livermore, and Milpitas.

There is a significant range of fees charged by jurisdictions. Fees range from less than $1.00 per square foot in San Diego to San Francisco, which charges the highest per square foot fees. The following is San Francisco's fee schedule:

- Office space, $14.96/sf
- Entertainment, $13.95/sf
- Hotel, $11.21/sf
- Research and development, $9.97/sf
- Retail, $13.95/sf

San Diego's fee schedule is as follows:

- Office space, $1.06/sf
- Hotel, $0.64/sf
- Research and development, $0.80/sf
- Manufacturing, $0.64/sf
- Warehouse/Office, $0.36/sf
- Warehouse, $0.27/sf

Some cities establish a minimum square footage threshold to exempt smaller developments. For example, Berkeley exempts developments smaller than 7,500 square feet. San Francisco exempts developments smaller than 25,000 square feet. Other cities do not exempt projects based on size; however, exemptions may be based on other factors. For example, Sacramento requires developers to demonstrate special circumstances, financial hardship, or project infeasibility in order to qualify for an exemption. Mountain View charges lower fees for smaller developments.

For the most part, cities require fees to be paid prior to receipt of a building permit. Cities typically adopt this policy because it is the period when the jurisdiction has the greatest leverage over a developer. Two cities, Berkeley and Santa Monica, allow developers to pay fees over time. When the ordinance becomes effective in 2006, Oakland will also allow developers to pay fees over time, with the last payment occurring 18 months after issuance of the temporary certificate of occupancy. Santa Monica requires future payments to be secured by letters of credit because the City experienced non-payment of fees after building permits were secured by developers.

IV. NEXUS ANALYSIS

A. Summary

In order to establish a nexus fee on commercial/industrial development to increase the production of affordable housing, the City of Long Beach must demonstrate that there is a reasonable relationship between non-residential construction and the need for housing affordable to low and moderate income groups.

In essence, the legal requirement is that a local government charging a fee make some affirmative showing that: (1) those who must pay the fee are contributing to the problem which the fee will address; and (2) the amount of the fee is justified by the magnitude of the fee-payer's contribution to the problem. Our nexus analysis is designed to demonstrate the economic relationship between non-residential development and the need for affordable housing in Long Beach. We employ consistently conservative assumptions, so that our calculation of the justifiable fee understates the supportable nexus calculation for each building type.

1. Income Levels and Building/Land Use Types

This analysis determines the number of employee households in each of the following three income categories:

Very low income: those earning less than 50% of area median income;

Low income: those earning between 50% and 80% of area median income;

Moderate income: those earning between 80% and 120% of area median income.

We examined the development of 100,000 square foot building modules of the following six building types:

Office (Class A);
"Big Box" Retail;
Community Retail;
Light Manufacturing; and
Hotel.

The analysis was conducted for the City of Long Beach.

2. Nexus Methodology

The nexus economic analysis methodology employs the following seven steps:

1. Estimate total new employees;

2. Estimate new employees living in the city of Long Beach;

3. Adjust for potential future increase in labor force participation;

4. Estimate the number of new households represented by the number of new employees;

5. Distribute households by occupational groupings for each land use;

6. Estimate employee households meeting very low, low, and moderate income limits, adjusted for household size; and

7. Adjust for multiple earner households.

The results of these seven steps is the estimated number of households by land use living in Long Beach and qualifying as very low, low or moderate income. In Chapter V, the results of a housing affordability gap analysis are used to determine the fee amount by land use that would be required to develop housing affordable to the very low, low and moderate income households who will need to find housing in Long Beach in connection with new non-residential development in the City.

3. Conclusions

The first conclusion is that a clear nexus exists between the employees of the various commercial and industrial buildings and the number of lower and moderate income households associated with the buildings.

The numerical results of the analysis are that for every 100,000 square feet of building area, on average, there are a number of very low and low income employee households that will live in the City of Long Beach, as summarized in **Table 6** below. Community retail uses are associated with the highest number of qualifying households per 100,000 square feet, because of the relatively high employment density and high percentage of low wage workers associated with retail buildings. For every 100,000 square feet of office space, 21 new resident very low, low and moderate income households will be created.

Table 6
ESTIMATED INCOME-QUALIFYING EMPLOYEE HOUSEHOLDS
PER 100,000 SQUARE FEET OF BUILDING AREA
BY LAND USE TYPE

Land Use/ Building Type	Number of Households Per 100,000 SF Building		
	50% AMI or Below	50% to 80% AMI	80% to 120% AMI
Office	8	5	8
"Big Box" Retail	4	5	2
Community Retail	9	9	5
Light Manufacturing	5	4	2
Hotel	4	2	1

B. Methodology and Assumptions

The analysis presented in this report has been based on a variety of sources. The 2000 U.S. Census was frequently utilized, with comparisons to the 1990 Census. Other principal data sources include the California State Employment Development Department (EDD) and the Southern California Association of Governments. Data specific to the City of Long Beach were used wherever possible.

In a few cases where limited current data is available, estimates were based on the best available data.

This analysis requires a number of assumptions. In all cases, we consistently employ conservative assumptions that serve to understate the nexus calculation. The cumulative effect of these assumptions understates the supportable nexus calculation for each building type. We do not believe, therefore, that changing individual assumptions would fundamentally alter the conclusions of the analysis.

Each of the steps in the nexus analysis is described below, along with corresponding assumptions and data sources.

1. Estimate Total New Employees

The first step estimates the total number of direct employees who will work at or in the building type being analyzed. This step implicitly assumes that all employees are new employees to the City. If the employees in a building have relocated from other buildings, they will have vacated spaces somewhere else and somewhere else in the chain new employees will have come to the City of Long Beach to work.

The estimate of the number of employees that will be working in each 100,000 square foot building module is based on an employment density factor for each land use (i.e. number of square feet per employee). For all of the land uses except hotel, the gross building area is divided by the employment density factor to calculate employment, as illustrated below:

Gross Building Area	divided by	Employment Density	=	Employment

For hotels, employment generation can be related to building square feet or the number of hotel rooms.

The employment density factor is different for each land use and can vary within each land use. DRA reviewed industry standards and trends in employment density factors as reported by the Urban Land Institute. DRA also reviewed an employment density study prepared for the Southern California Association of Governments (SCAG) by The Natelson Company, Inc. in October, 2001.

The Natelson study developed employment density factors for ten major land use categories. The study first developed employee per acre factors using acreage data from the SCAG land use database and employment data from various sources including Dun & Bradstreet and the State of California Employment Development Department. The study then derived building square feet per employee factors based on a sample of assessor's parcel records. The Natelson study developed employment density factors based on both median and average employees per acre and FAR calculations. The resulting factors for both Los Angeles County and the six-county SCAG region are summarized in **Table 7** below.

According to the 1998 Urban Land Institute, "Office Development Handbook," ten years ago, the industry rule of thumb for office uses was 250 square feet of space per employee, including a proportionate share of the lobby, corridor and restroom space in office buildings. Today, less space per employee is the norm, with many new office buildings providing 200 square feet or less per employee. [1] The Natelson study shows more space per employee for office uses, ranging from 319 to 471 square feet per employee for office uses in Los Angeles County. To be conservative, DRA selected a factor for office uses approximating the results of the Natelson study.

[1] Source: 1998 Urban Land Institute, "Office Development Handbook," Second Edition.

Table 7
SQUARE FEET PER EMPLOYEE BY LAND USE[2]
NATELSON EMPLOYEE DENSITY STUDY
October 31, 2001

Land Use Category	Los Angeles County	Six-County Region
Regional Retail	N/A	857
Other Retail/ Services	424	344
Low-Rise Office	319	288
High-Rise Office	440	311
Hotel/Motel	N/A	1,152
R&D/ Flex Space	1,796	344
Light Manufacturing	829	439
Warehouse	1,518	814
Government Offices	1,442	261

N/A = Insufficient data to develop employment density factor for that land use/geography.
Source: The Natelson Company, Inc., "Employment Density Study," prepared for the Southern California Association of Governments, October 31, 2001.

In retail development, the opposite trend is true. "Big box" warehouse club retailers represent one of the new, successful trends in retail development. These stores generally have a lower employment density than the historical rule of thumb for retail of approximately 300 to 400 square feet per employee. Retail employee densities in more traditional community retail prototypes are likely to remain higher.

Although light manufacturing facilities vary in terms of employment generation, we have assumed an employment density factor of 800 square feet per employee, consistent with the Natelson study figure for light manufacturing uses in Los Angeles County.

For hotels, the number of employees per room typically varies from 0.5 to 0.8, with higher-end hotels having the higher employment density. Using a mid-point of 0.65 employees per room and assuming an average of 750 square feet per room, including common and lobby spaces, this translates into 1,149 square feet per employee. This is virtually identical to the figure for hotel uses in the Natelson study..

[2] Factors derived from average employees per acre and average FAR.

Based on this review, the employment density factors used in this analysis are as follows:

Office	400 sq. ft./employee
"Big Box" Retail	800 sq. ft./employee
Community Retail	400 sq. ft./employee
Light Manufacturing	800 sq. ft./employee
Hotel	0.65 employees per room[3]

Sources: Urban Land Institute; The Natelson Company, "Employment Density Study," October 31, 2001.

2. Estimate Employees Living in the City of Long Beach

This step estimates the number of new residents in Long Beach that would be associated with new employment growth in the City. The extent to which employees in new non-residential developments will be filled by new Long Beach residents, or by employees who would reside in Long Beach if affordable housing were available, is a critical factor in the nexus economic analysis. With this assumption, as with the other variables in the analysis, we have chosen to be conservative.

The 1990 Census indicates that 44.5 percent of the people who worked in the City also resided in the City. 2000 Census data indicate that this percentage declined to 33.4 percent by 1999. This is likely due to the economic recession of the early 1990's, in general, and the major loss of jobs at Boeing manufacturing plants in Long Beach, in particular.

For the purposes of this analysis, we have assumed that 33 percent of new Long Beach workers will reside in the City of Long Beach. This is a conservative assumption given that lower income workers (the focus of a potential fee) tend to live closer to work. Using this factor, the number of employees residing in Long Beach is calculated for each land use as follows:

Employment	x	Percentage of Workers Residing in the City of Long Beach	=	Employees Residing in the City of Long Beach

Source: 1990 and 2000 U.S. Census, STF 3A.

[3] Projections assume 750 square feet per room; equivalent to 1,149 square feet per employee.

3. Adjust for Potential Increase in Labor Force Participation

While most new workers in non-residential development in Long Beach will come from outside of the City, DRA evaluated the extent to which new jobs are likely to be filled by existing residents in the City. This step reduces the number of new employees expected to need new housing in Long Beach, to take into account employees who were previously living in the City but were not previously working.

During the 1970's and 1980's, many people, particularly women, entered the labor force for the first time, or the first time after a lengthy absence. Labor participation rates increased during this period. 1990 Census data indicate that 67.3 percent of persons 16 years and over were in the labor force. By 2000, this percentage declined to 61.7 percent. Again, this decline is likely due to the economic recession and loss of jobs at Boeing plants during the 1990's.

In addition to new workers entering the labor force, another potential source of new employees is the pool of unemployed workers in the City. Unemployment in Long Beach area was at historically low rates in the 1990's. In 1990, the annual average unemployment rate for the City of Long Beach was 5.5 percent, dropping to 5.0 percent in 2000. The unemployment rate increased to 6.2 percent in January, 2003, according to the California Employment Development Department.

Given the low employment rate, it is unlikely that a significant proportion of new jobs in Long Beach will be filled by existing unemployed residents. However, with the recent decline in labor participation rates, there is some room for increased labor participation by the existing population. For the purpose of this analysis, we estimate 5 percent of all new jobs will be filled by residents of existing Long Beach households to take account of both of these factors.

Source: 1990 and 2000 U.S. Census; California Employment Development Department.

4. Estimate Number of Households

Since demand for affordable housing is based on households and not the total population, this step estimates the number of households represented by a given number of employees. Many households contain more than one worker, so each new employee does not necessarily mean a new household.

The 1990 Census reported 197,118 employed residents and 158,975 households in Long Beach, for a ratio of 1.24 employees per household. Long Beach has a large number of elderly households with no workers, therefore including them in the ratio skews the rate of household formation. Therefore, we also calculated the ratio of non-elderly workers to non-elderly households in Long Beach. 1990 Census data indicate that there were 506 employed residents aged 65 years or older and 29,897 households with a household head aged 65 years or older in Long Beach. Therefore, there were 196,612 non-elderly workers in Long Beach, compared to an estimated 129,078 non-elderly households, for a ratio of 1.52 non-elderly workers per non-elderly household.

The 2000 Census reported 189,487 employed residents and 163,088 households in Long Beach, for a ratio of 1.16 employees per household. 2000 Census data indicate that there were 4,508 employed residents aged 65 year or older and 24,920 households with a household head aged 65 year or older in Long Beach. Therefore, there were 184,979 non-elderly workers in Long Beach and 138,168 non-elderly households, for a ratio of 1.34 non-elderly workers per non-elderly household.

For the purposes of this analysis, we have used a factor of 1.34 workers per household, based on the most recent Census data for non-elderly households. Or stated another way, for every 100 workers, we assume 75 new households will be formed. Using this factor, the number of households is calculated as follows:

Employees In New Households	divided by	Average Number of Workers per Household	=	New Households

Sources: 1990 U.S. Census, STF 1 and STF 3; 2000 U.S. Census, SF 1 and SF 3.

5. Distribute Employee Households By Occupation

This step distributes households by occupational groupings for each land use. This step is necessary to be able to accurately estimate new workers' incomes. Our estimates are based on a review of the 1990 U.S. Census Occupation by Industry Survey, which is the only source available which provides cross-tabulations of occupation by industry. For purposes of this analysis, we have used the occupational groupings defined by the State of California Employment Development Department, for consistency with the occupational wage data used in Step 6. These categories are generally similar to those used by the Census. For each land use category, the total number of new worker households is disaggregated into occupational categories as follows:

Occupational Category	Office	Light Manufacturing	Retail	Hotel
Managerial/Administrative	21%	9%	15%	6%
Professional/Technical	16%	8%	5%	3%
Sales and Related	8%	0%	52%	0%
Clerical/Administrative Support	45%	23%	10%	15%
Service	5%	0%	0%	70%
Production/Operating/Maintenance	5%	60%	18%	6%
Total	100%	100%	100%	100%

Source: 1990 U.S. Census, Occupation by Industry Survey

6. Estimate Employee Households Meeting Very Low, Low and Moderate Income and Household Size Criteria Definitions

This step estimates the number of employee households in the occupational categories used in Step 5 that meet very low, low and moderate income criteria. First, typical wages are estimated for employees in each occupational category. Since HUD income limits depend on both household size and household income, we also estimate household sizes. Using available wage and household size data, we determine the number of employee households by land use that meet the very low, low and moderate income limits.

a. Estimated Wages by Occupation

The primary source of information for this step was State of California Employment Development Department wage data by occupation for the Los Angeles-Long Beach MSA, for December, 2002. Data on mean, 25th percentile and 75th percentile hourly wages by occupation were used to estimate the percentage of employees earning salaries in the very low, low or moderate income categories based on the 2003 HUD income limits for Los Angeles-Long Beach MSA.

Table 8 summarizes the 2002 wage survey data by major occupational category. These weighted average hourly wage data are derived from wages on 600 occupational categories.

Table 8
Wages by Occupational Grouping
Los Angeles-Long Beach MSA
December, 2002

SOC Code Prefix Range (1)	Occupational Category	Employment Estimates	Percent ofTotal Employment	Entry-Level Hourly Wage (2)	Mean Hourly Wage	Mean Annual Wage	25th Percentile Hourly Wage	75th Percentile Hourly Wage
11	Managerial and Administrative	213,620	5.6%	$22.07	$34.92	$73,312.74	$25.27	$33.58
13 - 31	Professional, Paraprofessional, and Technical	970,400	25.3%	$17.14	$24.91	$53,237.37	$19.23	$23.91
33 - 39	Sales and Related	384,240	10.0%	$11.19	$20.08	$41,770.28	$12.86	$18.60
41	Clerical and Administrative Support	787,640	20.6%	$10.29	$14.55	$30,271.27	$11.30	$13.84
43	Service	525,320	13.7%	$9.63	$13.30	$28,016.24	$10.33	$12.44
45	Agricultural and Related	2,990	0.1%	$8.99	$12.13	$25,232.57	$9.75	$11.48
47-53	Production, Construction, Operating, Maintenance and Material Handling	945,120	24.7%	$10.27	$15.23	$32,289.93	$11.35	$14.49
	TOTAL	3,829,330	100.0%					

(1) The first two digits of the six digit Standard Occupational Classification (SOC) code.

(2) The mean of the first third of the wage distribution is provided as a proxy for entry-level wage.

Source: California Employment Development Department, Occupational Employment Statistics Survey, December, 2003; David Paul Rosen & Associates.

b. Estimated Household Sizes

HUD's criteria for qualifying households as very low, low or moderate income are dependent on a household meeting certain income limits. HUD income limits are adjusted by household size, with higher income limits for larger households. The distribution of non-elderly households by household size for Long Beach in 2000 is summarized below.

Distribution of Households by Household Size
Households with Householder Less than 65 Years of Age
City of Long Beach
2000 Census

Household Size	Households	
	No.	%
1 Person	48,207	29.6%
2 Persons	44,338	27.2%
3 Persons	23,471	14.4%
4 Persons	20,297	12.4%
5 Persons	12,837	7.9%
6 Persons	6,972	4.3%
7 or More	6,966	4.3%
Total	**119,857**	**100.0%**

c. Estimated Qualifying Households

As noted above, HUD income limits vary by household size. Current 2003 income limits for the Los Angeles-Long Beach MSA are summarized below. The very low and low income units equal HUD 2003 income limits for these categories. The moderate income limit is based on the California Department of Housing and Community Development (HCD) moderate income limits for 2003.

Family Size	1	2	3	4	5
Very Low Income (50% of median)	$19,750	$22,550	$25,400	$28,200	$30,450
Low Income (80% of median)	$31,600	$36,100	$40,600	$45,100	$48,750
Moderate Income (120% of median)	$46,250	$52,900	$59,500	$66,100	$71,400

Table 9 presents DRA's estimates of the percentage of employees in each occupational category meeting low and moderate income limits based on the wage survey data and HUD 2003 income limits for the Los Angeles-Long Beach MSA. The percentage distribution of hourly wages by occupation was compared to very low, low and moderate income limits translated into hourly wages. A separate percentage distribution was calculated for income limits for household sizes of 1 through 5 persons. The weighted average percentages shown in Table 9 were then calculated based on the distribution of households by household size for Long Beach in 2000, shown above.

Sources: California Employment Development Department, Occupational Employment Statistics (OES) Survey, December, 2002; U.S. Department of Housing and Urban Development; 2000 U.S. Census.

Table 9
ESTIMATED PERCENT DISTRIBUTION OF WAGES BY OCCUPATION AND INCOME LEVEL (1)
LOS ANGELES-LONG BEACH MSA
2003

	Est. % of Workers Earning Less than 50% AMI	Est. % of Workers Earning 50% to 80% AMI	Est. % of Workers Earning 80% to 120% AMI	Est. % of Workers Earning Above 120% AMI	Total Percent of Employees
Managerial and Administrative Occupations	5%	12%	39%	43%	100%
Professional, Paraprofessional, and Technical Occupations	13%	37%	26%	23%	100%
Sales and Related Occupations	41%	39%	10%	10%	100%
Clerical and Administrative Support Occupations	55%	22%	22%	0%	100%
Service Occupations	61%	19%	10%	10%	100%
Agricultural and Related Occupations	67%	33%	0%	0%	100%
Production, Construction, Operating, Maintenance and Material Handling Occupations	53%	32%	8%	8%	100%

(1) Based on 2003 HUD income limits for Los Angeles-Long Beach MSA and December, 2002 OES wage survey data from Table 8.

Source: California Employment Development Department, 2002 Occupational Employment Statistics Survey;
David Paul Rosen & Associates.

7. Adjust for Multiple Earner Households

Some households have two or more incomes such that the combined incomes will place the household over very low, low or moderate income limits. This last step makes an adjustment to eliminate households that have two or more earners. This is a very conservative assumption since many households with two wage earners still qualify as very low income. For example, a three-person, two worker-household where each worker earns $6.10 per hour, less than the current minimum wage, would qualify as very low income in Long Beach in 2003.

According to 2000 U.S. Census data, 43 percent of worker families have only one wage earner. For those households, the salary of the wage earner calculated in the steps above is also the household income for that wage earner. We have used this 43 percent factor to eliminate two wage-earner households which, as we have noted, is a conservative assumption.

This final adjustment produces the number of lower income households directly associated with the construction of 100,000 square feet of building area by type as follows:

Number of Qualifying Households	x	% Adjustment to Eliminate Multiple Earner Households	=	Adjusted Number of Households Requiring Assistance

Source: 2000 Census of Population

C. Findings

Table 10 calculates the projected occupational distribution of employment by land use type for office, warehouse/distribution, retail and hotel uses in Long Beach. **Table 11** estimates the number of qualifying very low income households earning no more than 50 percent of area median income or below by land use type. **Table 12** estimates the number of qualifying low income households earning between 50 percent and 80 percent of area median income by land use type. **Table 13** estimates the number of qualifying moderate income households earning between 80 percent and 120 percent of area median income by land use type.

Table 10
PROJECTED OCCUPATIONAL DISTRIBUTION
OF ADDITIONAL EMPLOYMENT
BY LAND USE TYPE

CITY OF LONG BEACH

2003

Steps	Factor	Office			Light Manufacturing			"Big Box" Retail			Community Retail			Hotel		
		%	No.	Units	%	No.	Units	%	No.	Units	%	No.	Units	%	No.	Units
1. Estimate of Employees per 100,000 square feet																
Employment Density Factor (1)			400	SF/Emp.		800	SF/Emp.		800	SF/Emp.		400	SF/Emp.		0.65	Emp./Rm.
															750	SF/Room
Number of Employees			250	Emp.		125	Emp.		125	Emp.		250	Emp.		87	Emp.
2. Employees Living in City of Long Beach (2)	33%		83	Emp.		41	Emp.		41	Emp.		83	Emp.		29	Emp.
3. Adjustment for Labor Force Participation Increase	5%		78	Emp.		39	Emp.		39	Emp.		78	Emp.		27	Emp.
4. Adjustment for Number of Employees Per Household	1.34 Emp/HH		58	HH		29	HH		29	HH		58	HH		20	HH
5. Occupational Distribution																
Managerial/Administrative		45%	26	HH	9%	3	HH	15%	4	HH	15%	9	HH	6%	1	HH
Professional/Technical		0%	0	HH	8%	2	HH	5%	1	HH	5%	3	HH	3%	1	HH
Sales and Related		0%	0	HH	0%	0	HH	52%	15	HH	52%	30	HH	0%	0	HH
Clerical/Administrative Support		45%	26	HH	23%	7	HH	10%	3	HH	10%	6	HH	15%	3	HH
Service		5%	3	HH	0%	0	HH	0%	0	HH	0%	0	HH	70%	14	HH
Production/Operating/Maintenance		5%	3	HH	60%	17	HH	18%	5	HH	18%	10	HH	6%	1	HH
Total		100%	58		100%	29		100%	28		100%	58		100%	20	

Legend: HH = households; SF = square feet; Emp = employees.

(1) Sources: The Natelson Company, "Employment Density Study Summary Report," 2001; Urban Land Institute.

(2) Source: 2000 U.S. Census.

Source: David Paul Rosen & Associates.

Table 11
ESTIMATED QUALIFYING VERY LOW INCOME HOUSEHOLDS BY LAND USE TYPE (1)
CITY OF LONG BEACH

2003

Steps (See Table 10 for Steps 1 through 4)	Office		Light Manufacturing		"Big Box" Retail		Community Retail		Hotel	
	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.
5. Occupational Distribution (2)										
Managerial/Administrative	45%	26	9%	3	15%	4	15%	9	6%	1
Professional/Technical	0%	0	8%	2	5%	1	5%	3	3%	1
Sales and Related	0%	0	0%	0	52%	15	52%	30	0%	0
Clerical/Administrative Support	45%	26	23%	7	10%	3	10%	6	15%	3
Service	5%	3	0%	0	0%	0	0%	0	70%	14
Production/Operating/Maintenance	5%	3	60%	17	18%	5	18%	10	6%	1
Total	100%	58	100%	29	100%	28	100%	58	100%	20
6. Households Earning Less than 50% AMI										
Managerial/Administrative	5%	1	5%	0	5%	0	5%	0	5%	0
Professional/Technical	13%	0	13%	0	13%	0	13%	0	13%	0
Sales and Related	41%	0	41%	0	41%	6	41%	12	41%	0
Clerical/Administrative Support	55%	14	55%	4	55%	2	55%	3	55%	2
Service	61%	2	61%	0	61%	0	61%	0	61%	9
Production/Operating/Maintenance	53%	2	53%	9	53%	3	53%	6	53%	1
Total		19		13		11		22		11
7. Adjustment to Eliminate Multiple Earner Households Earning in Excess of 50% AMI	43%	8		6		5		9		5

(1) Based on 100,000 square foot land use type prototypical developments.
(2) From Table 11.

Source: California Employment Development Department 2002 occupational wage survey; 2000 U.S. Census; of David Paul Rosen & Associates.

Table 12
ESTIMATED QUALIFYING LOW INCOME HOUSEHOLDS BY LAND USE TYPE (1)
CITY OF LONG BEACH

2003

Steps (See Table 10 for Steps 1 through 4)	Office		Light Manufacturing		"Big Box" Retail		Community Retail		Hotel	
	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.
5. Occupational Distribution										
Managerial/Administrative	45%	26	9%	3	15%	4	15%	9	6%	1
Professional/Technical	0%	0	8%	2	5%	1	5%	3	3%	1
Sales and Related	0%	0	0%	0	52%	15	52%	30	0%	0
Clerical/Administrative Support	45%	26	23%	7	10%	3	10%	6	15%	3
Service	5%	3	0%	0	0%	0	0%	0	70%	14
Production/Operating/Maintenance	5%	3	60%	17	18%	5	18%	10	6%	1
Total	100%	58	100%	29	100%	28	100%	58	100%	20
6. Households Earning Between 50% and 80% AMI										
Managerial/Administrative	12%	3	12%	0	12%	0	12%	1	12%	0
Professional/Technical	37%	0	37%	1	37%	0	37%	1	37%	0
Sales and Related	39%	0	39%	0	39%	6	39%	12	39%	0
Clerical/Administrative Support	22%	6	22%	2	22%	1	22%	1	22%	1
Service	19%	1	19%	0	19%	0	19%	0	19%	3
Production/Operating/Maintenance	32%	1	32%	6	32%	2	32%	3	32%	0
Total		10		8		9		19		4
7. Adjustment to Eliminate Multiple Earner Households Earning in Excess of 80% AMI	53%	5		4		5		10		2

(1) Based on 100,000 square foot land use type prototypical developments.
(2) From Table 11.

Source: California Employment Development Department 2002 occupational wage survey; 2000 U.S. Census; of David Paul Rosen & Associates.

Table 13
ESTIMATED QUALIFYING MODERATE HOUSEHOLDS BY LAND USE TYPE (1)
CITY OF LONG BEACH

2003

Steps (See Table 10 for Steps 1 through 4)	Office		Light Manufacturing		"Big Box" Retail		Community Retail		Hotel	
	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.
5. Occupational Distribution										
Managerial/Administrative	45%	26	9%	3	15%	4	15%	9	6%	1
Professional/Technical	0%	0	8%	2	5%	1	5%	3	3%	1
Sales and Related	0%	0	0%	0	52%	15	52%	30	0%	0
Clerical/Administrative Support	45%	26	23%	7	10%	3	10%	6	15%	3
Service	5%	3	0%	0	0%	0	0%	0	70%	14
Production/Operating/Maintenance	5%	3	60%	17	18%	5	18%	10	6%	1
Total	100%	58	100%	29	100%	28	100%	58	100%	20
6. Households Earning Between 80% and 120% AMI										
Managerial/Administrative	39%	10	39%	1	39%	2	39%	4	39%	0
Professional/Technical	26%	0	26%	1	26%	0	26%	1	26%	0
Sales and Related	10%	0	10%	0	10%	2	10%	3	10%	0
Clerical/Administrative Support	22%	6	22%	2	22%	1	22%	1	22%	1
Service	10%	0	10%	0	10%	0	10%	0	10%	1
Production/Operating/Maintenance	8%	0	8%	1	8%	0	8%	1	8%	0
Total		16		5		4		9		3
7. Adjustment to Eliminate Multiple Earner Households Earning in Excess of 120% AMI	53%	9		2		2		5		1

(1) Based on 100,000 square foot land use type prototypical developments.
(2) From Table 11.

Source: California Employment Development Department 2002 occupational wage survey; 2000 U.S. Census; of David Paul Rosen & Associates.

V. NEXUS FEE AMOUNT

This section uses the results of the previous section on the number of households in the lower income categories associated with each building type and identifies the fee required to mitigate new demand generated by each building type for housing affordable to low and moderate income households.

A. Affordability Gap Analysis

The affordability gap analysis compares the cost of housing development in Long Beach to the amount low and moderate income households can afford to pay for housing. The affordability gap represents the capital subsidy required to develop housing affordable to families at specified income levels. The findings of the gap analysis are used to calculate the fee amount for which a nexus can be shown.

The methodology, key assumptions and findings of the affordability gap analysis are summarized below. The complete gap analysis is contained in the Inclusionary Housing Analysis prepared by DRA under separate cover.

1. Methodology

The first step in the gap analysis establishes the amount a tenant or homebuyer can afford to contribute to the cost of renting or owning a dwelling unit. California Redevelopment Law[4] (CRL), the U.S. Department of Housing and Urban Development (HUD) and most other sources of subsidy for affordable housing generally define affordable housing expense at 30 percent of a household's gross income. For moderate income homeowners, CRL defines affordable housing expense at 35 percent of gross income.

For renters, CRL and HUD define affordable housing expense to include rent plus utilities. Affordable net rents are calculated subtracting allowances for the utilities paid directly by the tenants from the overall affordable housing expense. For owners, the affordable mortgage principal and interest payment is calculated by determining the affordable housing expense and deducting costs for taxes, property insurance, utilities, homeowner association dues and maintenance expense. This is consistent with the definition of affordable housing expense for owners under CRL.

The second step estimated the costs of constructing or preserving affordable housing in Long Beach. As part of the "Inclusionary Housing Analysis" prepared by DRA under separate cover, DRA calculated the affordability gap for two renter prototypes and four owner prototypes. The rental apartment prototype is used to establish the gaps for very low and low income households, who are assumed to be renters. The owner condominium prototype is used to calculate the gap for moderate income households, who are assumed to be homeowners.

[4] CRL governs the use of redevelopment tax increment Housing Set-Aside Funds, the largest source of local subsidies for affordable housing in California.

The third step in the gap analysis establishes the housing expenses borne by the tenants and owners. These costs can be categorized into operating costs, and financing or mortgage obligations. Operating costs are the maintenance expenses of the unit, including utilities, property maintenance, property taxes, management fees, property insurance, replacement reserve, and insurance. For the rental prototypes examined in this analysis, DRA assumed that the landlord pays all but certain tenant-paid utilities as an annual operating cost of the unit paid from rental income. For owner prototypes, DRA assumed the homebuyer pays all operating and maintenance costs for the home.

Financing or mortgage obligations are the costs associated with the purchase or development of the housing unit itself. These costs occur when all or a portion of the development cost is financed. This cost is always an obligation of the landlord or owner. Supportable financing is deducted from the total development cost, less any owner equity (for owner-occupied housing, the downpayment) to determine the capital subsidy required to develop the prototypical housing unit affordable to an eligible family at each income level.

For rental housing prototypes, the gap analysis calculates the difference between total development costs and the conventional mortgage supportable by net operating income from restricted rents. For owners, the gap is the difference between development costs and the supportable mortgage plus the buyer's downpayment.

The purpose of the gap analysis in this report is to determine the fee amount by land use that would be required to develop housing affordable to the very low, low and moderate income households who will need to find housing in Long Beach in connection with new non-residential development in the City. Therefore, no housing subsidies, or leverage, are assumed.

2. Affordable Housing Cost Definitions

DRA analyzed the gap for very low and low income renter households and for moderate income owner households. Calculation of the affordability gap requires definition of affordable housing expense for renters and owners. The affordable housing cost definitions used in this gap analysis are shown below. Affordable housing cost is typically set at the top of the income range, which means that all households except those at the upper limit of the income range will be overpaying for housing (paying more than 30 or 35 percent of their income). For the purposes of this analysis, affordable housing cost was defined at a point somewhat below the maximum of the income category to better reflect the range of household incomes contained in each category.

Affordable Housing Cost Definitions
Long Beach Affordability Gap Analysis

Income Level	Affordable Housing Cost Definition
50% AMI (Very Low Income)	30% of 45% AMI
80% AMI (Low Income)	30% of 60% AMI
120% AMI (Moderate Income)	35% of 90% AMI

3. Summary of Findings

DRA estimated the development costs for renter and owner housing prototypes, and calculated the supportable debt from affordable rents or mortgage payments. This analysis is contained in the City of Long Beach Inclusionary Housing Analysis prepared by DRA under separate cover. To be conservative for the purposes of the nexus analysis, we have used the affordability gaps from the lowest cost prototypes. These are the Type V construction apartments for renters and Type V condominiums for owners. Per unit total development costs, supportable mortgages and affordability gaps are summarized in **Table 14** below for the renter and owner prototypes analyzed.

Table 14
Total Per Unit Development Costs, Supportable Mortgage, and Affordability Gap
City of Long Beach Housing Prototypes

	Type V Rental Apartments	Type V Owner Condominiums
Development Costs		
Land Costs	$ 16,000	$ 16,000
Hard Costs	96,000	113,000
Financing Costs	7,000	11,000
Other Soft Costs	46,000	61,000
Total Development Costs	$165,000	$201,000
Supportable Mortgage[5]		
Very Low Income	17,000	N/A
Low Income	37,000	N/A
Moderate Income	N/A	$141,000
Affordability Gap		
Very Low Income	$148,000	N/A
Low Income	128,000	N/A
Moderate Income	N/A	$60,000

[5] Includes per unit supportable mortgage at affordable housing cost; equals average for housing prototype across unit sizes. For owner prototypes, includes 10 percent buyer downpayment.

B. Supportable Nexus Fee Amount

The last step in the nexus analysis is to multiply the number of households in each income category by the cost of making housing affordable to them. We used the per unit affordability gaps listed in Table 12 above..

Table 15 presents the calculation of the justifiable nexus fee. The findings are summarized below.

Household Income Category	Supportable Nexus Fee Per Building Square Foot				
	Office	Light Manuf.	"Big Box" Retail	Commun. Retail	Hotel
Very Low	$12.08	$7.55	$6.04	$13.59	$6.04
Low	$6.55	$5.24	$6.55	$11.79	$2.62
Moderate	$3.84	$0.96	$0.96	$2.40	$0.48
Total	$22.47	$13.75	$13.55	$27.78	$9.14

The conclusion of the analysis is that the fee amount needed to offset housing demand created by office building construction for very low income households is $22.47 per square foot. This is based on the conservative assumptions noted above and the actual amount is likely higher. The lowest fee is for hotel uses where the justified fee amount calculates to $9.14 per square foot.

The justified fee amounts are useful measuring sticks, and as a ceiling above which any fee structure would be subject to legal challenge. Given the assumptions intrinsic to any nexus analysis, setting fees below the justified fee amount would make it less likely that a challenge to any one assumption would affect the whole program. Given the high level of supportable fees in Long Beach, an acceptable fee is likely to be less than the justified fee amount for most uses.

Table 15
JUSTIFIABLE HOUSING LINKAGE FEE BY LAND USE
CITY OF LONG BEACH

2003

		Office	Light Manufacturing	"Big Box" Retail	Community Retail	Hotel
Very Low Income Households						
1. Very Low Income Households Employed per 100,000 SF Development		8	6	5	9	5
2. Estimated Housing Gap Cost at Per Unit Gap of: (1)	$148,000	$1,184,000	$888,000	$740,000	$1,332,000	$740,000
3. Cost of Housing Gap Per Square Foot Bldg. Area		**$11.84**	**$8.88**	**$7.40**	**$13.32**	**$7.40**
Low Income Households						
1. Low Income Households Employed per 100,000 SF Development		5	4	5	10	2
2. Estimated Housing Gap Cost at Per Unit Gap of: (1)	$128,000	$640,000	$512,000	$640,000	$1,280,000	$256,000
3. Cost of Housing Gap Per Square Foot Bldg. Area		**$6.40**	**$5.12**	**$6.40**	**$12.80**	**$2.56**
Moderate Income Households						
1. Moderate Income Households Employed per 100,000 SF Development		9	2	2	5	1
2. Estimated Housing Gap Cost at Per Unit Gap of: (1)	$60,000	$540,000	$120,000	$120,000	$300,000	$60,000
3. Cost of Housing Gap Per Square Foot Bldg. Area		**$5.40**	**$1.20**	**$1.20**	**$3.00**	**$0.60**
Total Fee Per Square Foot		**$23.64**	**$15.20**	**$15.00**	**$29.12**	**$10.56**

(1) From "Inclusionary Housing Analysis" report prepared by DRA. For the very low and low income categories, we used the per unit gap for the Type V apartment prototype, with affordable housing cost pegged at 45% of area median income (AMI) and 60% AMI, respectively. For the moderate income category, we used the per unit gap for the owner Type V condo, with housing cost pegged at 90% of AMI.

Legend: HH = households; SF = square feet; Emp = employees..

Source: Urban Land Institute; Association of Bay Area Governments; 1990 Census of Occupation by Industry; California Employment

VI. NEXUS FEE REVENUE PROJECTIONS

Table 16 presents projected linkage fee revenues at alternative fee levels based on the current pipeline of major development projects in Long Beach. These projections are based on illustrative fee levels only, ranging from $2.00 per square foot to $10.00 per square foot.

The projections show potential revenues from major projects in the following major stages of the planning approval process in Long Beach: "preliminary" and "entitlements granted." We have excluded projects that are already under construction. A detailed description of the major projects in the development pipeline in Long Beach as of November 1, 2002 by land use category is contained in **Appendix A**.

The resulting projections indicate that developments that have already received entitlements would generate fee revenues of $1.8 million to $8.9 million at alternative fee levels ranging from $2.00 per square foot to $10.00 per square foot, respectively. Projects designated as preliminary would generate revenues of $1.4 million to $7.1 million at fee levels of $2.00 to $10.00 per square foot, respectively.

Combined total fees from all major projects in the development pipeline not under construction equal $3.2 million to $16.0 million at fees of $2.00 per square foot to $10.00 per square foot, respectively. Clearly, a housing linkage fee is potentially a significant source of funds to help mitigate demand for affordable housing associated with job growth, even at fee levels substantially below those justified by the economic analysis.

Table 16
COMMERCIAL DEVELOPMENT IMPACT FEE REVENUE PROJECTIONS
FROM THE CURRENT DEVELOPMENT PIPELINE
CITY OF LONG BEACH

2003

	Office	Retail/ Commercial	Hotel (1)	Industrial (2)	TOTAL
Development Pipeline (SF) (3)					
Entitlements Granted	292,000	52,834	173,250	368,328	
Preliminary	0	23,636	149,250	545,135	
Total Development Pipeline	**292,000**	**76,470**	**322,500**	**913,463**	
Projected Fee Revenues					
Revenues from Projects with Entitlements					
At a Per Square Foot Fee of:					
$2.00	$584,000	$105,668	$346,500	$736,656	$1,772,824
$4.00	$1,168,000	$211,336	$693,000	$1,473,312	$3,545,648
$6.00	$1,752,000	$317,004	$1,039,500	$2,209,968	$5,318,472
$8.00	$2,336,000	$422,672	$1,386,000	$2,946,624	$7,091,296
$10.00	$2,920,000	$528,340	$1,732,500	$3,683,280	$8,864,120
Revenues from Projects in Preliminary Stage					
At a Per Square Foot Fee of:					
$2.00	$0	$47,272	$298,500	$1,090,270	$1,436,042
$4.00	$0	$94,544	$597,000	$2,180,540	$2,872,084
$6.00	$0	$141,816	$895,500	$3,270,810	$4,308,126
$8.00	$0	$189,088	$1,194,000	$4,361,080	$5,744,168
$10.00	$0	$236,360	$1,492,500	$5,451,350	$7,180,210
Total Projected Fee Revenues (2)					
$2.00	$584,000	$152,940	$645,000	$1,826,926	$3,208,866
$4.00	$1,168,000	$305,880	$1,290,000	$3,653,852	$6,417,732
$6.00	$1,752,000	$458,820	$1,935,000	$5,480,778	$9,626,598
$8.00	$2,336,000	$611,760	$2,580,000	$7,307,704	$12,835,464
$10.00	$2,920,000	$764,700	$3,225,000	$9,134,630	$16,044,330

(1) Assumes an average of 750 gross square feet per hotel room applied to number of hotel rooms in the pipeline.
(2) The "industrial" pipeline consists primary of self-storage facilities.
(3) See Appendix C for a detailed listing of projects in the Long Beach development pipeline.

Source: David Paul Rosen & Associates.

VII. ECONOMIC IMPACT ANALYSIS

The section assesses the potential economic impact of a linkage fee on office, hotel, retail and warehouse/distribution land uses.

The increase in cost associated with the nexus fee, however large or small, must be absorbed in one of the following three ways, or some combination of the three:

1. through an increase to the cost to the end user of the building in the form of a price or rent increase;

2. through a decrease in profits to the developer who develops the site; and/or

3. through a decrease in the price for the land paid to the landowner.

In a competitive market, owners of commercial buildings are already commanding the maximum sales price or rents that the market will bear. Therefore, it is least likely that sales prices or rents will increase.

When an additional cost is imposed on a project after the land is purchased, the developer will most likely bear the cost in terms of reduced profit on projects in the pipeline. Over time, developers will shop for the highest return on their investment within the regional market area. The total amount of development impact fees is but one of many of the cost and income factors that determine the rate of return from one project compared to another. Ultimately, the fee is most likely to be absorbed through a decrease in land price after the market adjusts. This may take several years as the projects already in the pipeline are completed.

Given these potential alternative impacts, we use several different approaches in assessing the economic effect of a proposed linkage fee. We compare current development fees in Long Beach with other communities in the Southern California regional market. We conduct a land residual analysis that calculates the value attributed to land from proposed development on a site, with and without a nexus fee. We also use a market and investment approach that calculates the increase in rents, or decrease in the rate of return on investor equity, required to accommodate the fee at current market terms for both debt and equity financing.

A. Comparison of Development Impact Fees in Selected Cities

1. Regional Survey of Development Impact Fees

The City of Long Beach will be competing in the Southern California regional market to attract new non-residential development. We examine existing development impact fees, including commercial linkage fees and other types of development impact fees, in selected Southern California cities in order to compare fees in Long Beach with those in other communities.

City of Long Beach staff conducted a survey of development impact fees among selected Southland cities and counties to determine the types of fees charged by these jurisdictions and the amounts of these fees. Staff surveyed the following cities:

- City of Pasadena
- City of Los Angeles
- City of Glendale
- City of Santa Monica
- City of Carson
- City of Santa Ana
- City of Torrance
- City of Carlsbad
- Los Angeles County
- Orange County

The information was sorted by land use type to determine the types of fees charged on land use types that are incorporated in this nexus analysis. The fee information is presented for retail, residential, office, hotel, warehouse and restaurant uses. **Appendix B** includes the detailed findings from the development impact fee survey.

Development impact fee amounts and types vary greatly by jurisdiction. For commercial uses, typical fees include transportation, sewer, storm drain, fire facility, school district and art fees.

2. Estimated Total Development Impact Fees Per Square Foot

Using the survey information, City staff estimated total local development impact fees for prototype 50,000 square foot retail, residential, office, hotel, restaurant and warehouse/light manufacturing buildings. These totals are shown in **Appendix A**. DRA calculated the total fee per square foot land use, summarized in **Table 17** below.

Total development impact fees per square foot for the prototype projects vary widely by community. Long Beach currently charges development impact fees except ranging from $1.49 per square foot for restaurant uses to $4.00 per square foot for retail uses. Carson only charges a school fee of $0.42 per square foot on commercial development. Santa Monica only charges a school fee of $0.31 per square foot, except on office uses, for which total fees are $8.84 per square foot for the prototype project.

Santa Ana charges the highest fees, estimated at $9.71 to $11.20 per square foot for the prototype projects. Pasadena's total fees are estimated at $5.59 to $7.17 per square foot for the prototype projects.

Table 17
Estimated Total Development Fees Per Square Foot
50,000 Square Foot Land Use Prototypes
Long Beach and Selected Southern California Cities and Counties

City	Retail	Office	Hotel	Restaurant	Warehouse/ Light Manuf.
Carson	$0.42	$0.42	$0.42	$0.42	$0.33
Glendale	$1.02	$1.04	$1.01	$1.32	$0.69
Long Beach	**$4.00**	**$3.23**	**$3.42**	**$1.49**	**$1.81**
City of Los Angeles City	$1.13 plus transp.	$1.41 plus transp.	$1.65 plus transp.	$1.67 plus transp.	$1.21 plus transp.
Los Angeles County	$0.89	$0.89	$0.89	$0.89	$0.89
Pasadena	$5.59	$6.41	$7.11	$7.17	$5.82
Santa Ana	$10.28 plus sewer	$10.28 plus sewer	$11.20 plus sewer	$11.20 plus sewer	$9.71 plus sewer
Santa Monica	$0.31	$8.84	$0.31	$0.31	$0.31
Torrance	$1.54	$1.54	$1.54	$1.54	$1.54

Source: City of Long Beach staff survey of development impact fees; David Paul Rosen & Associates.

B. Land Residual Analysis

1. Land Residual Analysis Methodology

A land residual analysis methodology calculates the value attributed to land from proposed development on that site. It is commonly used by real estate developers and investors to evaluate development financial feasibility and select among alternative uses for a piece of property.

The land residual methodology calculates the value of a development based on its income potential and subtracts the costs of development and developer profit to yield the underlying value of the land. When evaluating alternative land uses, the alternative that generates the highest value to a site is considered its highest and best use. An alternative that generates a value to the land that is negative is generally not financially feasible.

DRA calculated net operating income from a 100,000 square foot building prototype for each commercial land use examined based on estimated market rents, vacancy rates and operating costs. Net operating income is capitalized assumed capitalization rates ranging from 8.5 percent to 9.0 percent, based on recent capitalization rate data as described below, to determine the value of the developed property. The capitalization rate is the ratio of net operating income to project fair market value, or sales price, exhibited in the market and reflects the rate of return required by investors in rental property. Total development costs are then subtracted from the capitalized value to yield the estimated residual land value.

2. Assumptions

Land residual analysis requires assumptions on gross income, vacancies and operating costs, hard construction costs, other development and soft costs for each land use to be examined. These assumptions are summarized in **Table 18.**

Current development costs by land use (excluding land costs) were estimated using *RS Means Square Foot Costs 2002* localized to the Los Angeles area. Current rents for office and hotel uses were derived through developer interviews and a review of available market information.

Estimated annual net operating income and total development costs (excluding land) for each of the 100,000 square foot building prototypes are shown in **Table 19**.

Land residual analysis also requires an assumed capitalization rate for calculating the value of the development from net operating income. DRA reviewed available information on capitalization rates in the Los Angeles area by development type for selected commercial and industrial land uses. These data, summarized in **Table 20**, are from the National Real Estate Index Market Monitor.

Table 18
LAND RESIDUAL ANALYSIS ASSUMPTIONS
CITY OF LONG BEACH COMMERCIAL DEVELOPMENT IMPACT FEE
ECONOMIC IMPACT ANALYSIS

COST/INCOME BY LAND USE	Unit of Measure	Class A Office	Big Box Retail	Community Retail	Hotel	Light Manufact.
Hard Construction Costs (1)	Gross SF	$108.00	$84.00	$84.00	$110.00	$79.00
Development Impact Fees (2)	Gross SF	$5.20	$6.00	$6.00	$5.30	$3.80
T.I. Allowance/FF&E	Net Rentable SF	$35.00	$0.00	$35.00	$35.00	$15.00
Gross Income (3)	Net Rentable SF	$24.00	$20.00	$26.00	$100.00	$23.00
Other Income	% of Gr.Inc.	0.0%	0.0%	0.0%	33.0%	0.0%
Operating Expenses	% of Gr.Inc.	5.0%	5.0%	5.0%	75.0%	5.0%
Efficiency	%	90.0%	95.0%	87.5%	75.0%	95.0%
Net SF/Unit	Net SF				750	
Occupancy Rate	%	95.0%	100.0%	95.0%	70.0%	100.0%
Parking Income	$/Space/Mo (4)	$75.00	$0.00	$0.00	$0.00	$0.00
Parking Expense	% of Gr.Inc.	20.0%	0.0%	0.0%	0.0%	0.0%
PARKING REQUIREMENTS						
Parking Spaces		2.4	5.0	5.0	1.2	2.0
Per		1000	1000	1000	1	1000
Unit		Gross SF	Gross SF	Gross SF	Room	Gross SF
PARKING COSTS						
Above-Grade Structured Parking		$25.00	Sq. Ft. @	400	SF/Space or	$10,000 /Space
Underground Parking		$50.00	Sq. Ft. @	400	SF/Space or	$20,000 /Space
Surface Parking		$2.57	Sq. Ft. @	350	SF/Space or	$900 /Space
CONTINGENCIES		3.0%	Percent of Total Hard Costs			
CONSTRUCTION FINANCING						
Construction Interest @		8.0%	Assumes 12 month development period and 60% average loan balanc			
Loan Origination Fees @		1.5%	Points			
SOFT COSTS						
Planning/Design		0.0%	Included in Hard Costs			
Taxes/Insurance/Legal/Accounting		2.0%	Percent of Hard Costs Plus Tenant Improvements			
Marketing/Leasing		2.0%	Percent of Hard Costs Plus Tenant Improvements			
Development Management		3.0%	Percent of Hard Costs Plus Tenant Improvements			
TOTAL SOFT COSTS		7.0%	Percent of Hard Costs Plus Tenant Improvements			

INDICATED SF BY USE	Class A Office	Big Box Retail	Community Retail	Hotel	Light Manufact.	TOTAL
Gross Building Square Feet	100,000	100,000	100,000	100,000	100,000	400,000
# of Hotel Rooms				133		133
PARKING--REQUIRED						
Total Parking Spaces By Use	240	500	500	160	200	1,600
PARKING ALLOCATION						
Above-Grade Parking Spaces	0.0%	0.0%	0.0%	0.0%	0.0%	
Underground Parking	100.0%	0.0%	0.0%	85.0%	0.0%	
Surface Parking	0.0%	100.0%	100.0%	15.0%	100.0%	
Total Parking Spaces	100.0%	100.0%	100.0%	100.0%	100.0%	
TOTAL PARKING SPACES						
Above-Grade Parking Spaces	0	0	0	0	0	0
Underground Parking	240	0	0	136	0	376
Surface Parking	0	500	500	24	200	1,224
Total Parking Spaces	240	500	500	160	200	1,600

(1) From R.S. Means, 2002. Includes architect and engineering fees at 6% to 8% depending on land use. See footnotes Table 9.
(2) Based on City estimates of development impact fees by land use from Table 1 plus $2.00 per SF for building permit/processing fees.
(3) For hotel use, income equals average daily room rate. For all other uses, income equals annual NNN rent per net rentable SF.
(4) Hotel parking income included in room rate.

Table 19
LAND RESIDUAL ANALYSIS CALCULATIONS
CITY OF LONG BEACH COMMERCIAL DEVELOPMENT IMPACT FEE
ECONOMIC IMPACT ANALYSIS

2003

	Class A Office (1)	Big Box Retail (2)	Community Retail (3)	Hotel (4)	Light Manufact. (5)
BUILDING SQUARE FEET	100,000	100,000	100,000	100,000	100,000
CONSTRUCTION COSTS (000's)					
Shell and Core Costs	$10,800	$8,400	$8,400	$11,000	$7,900
Parking Costs	$4,800	$450	$450	$2,742	$180
Permits and Fees	$520	$600	$600	$530	$380
TOTAL HARD COSTS	$16,120	$9,450	$9,450	$14,272	$8,460
Plus: Contingencies	$484	$284	$284	$428	$254
Plus: Tenant Improvements/FF&E	$3,150	$0	$3,063	$2,625	$1,425
Plus: Soft Costs	$1,349	$662	$876	$1,183	$692
Plus: Financing Costs	$1,329	$655	$861	$1,166	$682
TOTAL CONSTRUCTION COSTS (000's)	$22,432	$11,050	$14,533	$19,673	$11,513
TOTAL COSTS/SF	$224.32	$110.50	$145.33	$196.73	$115.13
NET (OPERATING) INCOME (000's)					
Gross Income By Use	$2,052	$1,900	$2,161	$3,398	$2,185
Plus: Other Income	$0	$0	$0	$1,121	$0
Plus: Parking Income	$216	$0	$0	$0	$0
TOTAL INCOME	$2,268	$1,900	$2,161	$4,520	$2,185
Less: Operating Expense	$146	$95	$108	$2,549	$109
NET (OPERATING) INCOME	$2,122	$1,805	$2,053	$1,971	$2,076
NET (OPERATING) INCOME /SF	$21.22	$18.05	$20.53	$19.71	$20.76

(1) Assumes annual NNN rent of $24 per net rentable square foot.
Assumes hard cost per square foot of $108 per square foot for an 5-10 story office building of 100,000 square feet, localized to the Los Angeles area, from *RS Means Per Square Foot Costs 2002.*

(2) Assumes annual NNN rent of $20 per net rentable square foot.
Assumes hard cost per square foot of $84 per square foot for a retail store, split-face concrete block construction, localized to the Los Angeles area, from *RS Means Per Square Foot Costs 2002.*

(3) Assumes annual NNN rent of $26 per net rentable square foot.
Assumes hard cost per square foot of $84 per square foot for a retail store, split-face concrete block construction, localized to the Los Angeles area, from *RS Means Per Square Foot Costs 2002.*

(4) Assumes average nightly room rate of $100 and average room size of 750 sq. ft.
Assumes hard cost per square foot of $110 per square foot for an 4-7 story hotel of 100,000 square feet, glass and metal curtain wall construction, localized to the Los Angeles area, from *RS Means Per Square Foot Costs 2002.*

(5) Assumes annual NNN rent of $15 per net rentable square foot.
Assumes hard cost per square foot of $79 per square foot for a manufacturing building, tilt-up concrete construction, localized to the Los Angeles area, from *RS Means Per Square Foot Costs 2002.*

Source: David Paul Rosen & Associates

Table 20
HISTORICAL CAPITALIZATION RATE DATA (1)
LONG BEACH

	CBD Office	Suburban Office	Retail	Warehouse
1991	7.4%	N/A	N/A	N/A
1995	8.6%	N/A	N/A	N/A
4th Quarter 1998	8.0%	8.4%	9.2%	8.2%
3rd Quarter 1999	8.2%	7.5%	9.0%	9.0%
4th Quarter 1999	8.1%	7.4%	9.1%	9.3%
1st Quarter 2002	7.5%	6.5%	9.1%	8.5%
4th Quarter 2002	7.0%	6.5%	8.4%	8.2%
1st Quarter 2003	7.0%	6.4%	8.4%	8.2%

(1) Contributors of property-level data to the National Real Estate Index include local CB Richard Ellis offices, CB Richard Ellis Appraisal Servics, CB Richard Ellis Investment Properties Group, Koll 1031 Exchange Services, L.J. Melody, and 150 other financial institutions, pension funds/advisc appraisal firms, insurance companies and real estate brokers.

Source: National Real Estate Index Market Monitor; David Paul Rosen & Associates

Capitalization rates change with expectations of returns from investment in various types of real estate development relative to other available investment opportunities. For CBD office uses, capitalization rates varied from a low of 7.0 percent in the first quarter of 2003 to a high of 8.6 percent in 1995. For suburban office uses, capitalization rates ranged from a low of 6.0 percent in the first quarter of 2003 to a high of 8.4 percent in the fourth quarter of 1998. Capitalization rates for retail and warehouse uses have generally remained above those for office uses, ranging from 8.4 percent to 9.2 percent for retail and 8.2 percent to 9.0 percent for warehouse.

3. Findings

DRA calculated residual land values for Class A office, "big box" retail, community retail, hotel and light manufacturing uses. We calculated residual land values without any nexus fee, and then again with the nexus fee at levels ranging from $2.00 to $10.00 per square foot. The findings of the land residual analysis are summarized in **Table 21.**

Data on vacant commercial and industrial land sales in Long Beach between January 1, 2002 and February 15, 2003 from Dataquick Information Systems are summarized in **Table 22**. We also reviewed recent appraisals of land with commercial or planned development (PD) zoning. This information is summarized in **Table 23**.

Table 21
LAND RESIDUAL ANALYSIS
100,000 SQUARE FOOT BUILDING PROTOTYPES
CITY OF LONG BEACH COMMERCIAL DEVELOPMENT IMPACT FEE
ECONOMIC IMPACT ANALYSIS

Land Use:		Class A Office	"Big Box" Retail	Community Retail	Class A Hotel	Light Manufact.
Gross SF Bldg Area		100,000	100,000	100,000	100,000	100,000
Net SF Site Area		58,824	400,000	400,000	58,824	400,000
Floor Area Ratio		1.70	0.25	0.25	1.70	0.25
Ann. Net Operating Income (000's)		$2,122	$1,805	$2,053	$1,971	$2,076
Assumed Capitalization Rate:		8.50%	9.00%	9.00%	9.00%	9.00%
Capitalized Value (000's) @:		$24,967	$20,056	$22,813	$21,899	$23,064
Total Develop. Costs Except Land (000's)						
No Nexus Fee		$22,432	$11,050	$14,533	$19,673	$11,513
Nexus Fee of:	$2.00	$22,632	$11,250	$14,733	$19,873	$11,713
Nexus Fee of:	$4.00	$22,832	$11,450	$14,933	$20,073	$11,913
Nexus Fee of:	$6.00	$23,032	$11,650	$15,133	$20,273	$12,113
Nexus Fee of:	$8.00	$23,232	$11,850	$15,333	$20,473	$12,313
Nexus Fee of:	$10.00	$23,432	$12,050	$15,533	$20,673	$12,513
Nexus Fee of:	$15.00	$23,932	$12,550	$16,033	$21,173	$13,013
Nexus Fee of:	$20.00	$24,432	$13,050	$16,533	$21,673	$13,513
Resid. Land Value (000's)						
No Nexus Fee		$2,535	$9,006	$8,280	$2,226	$11,551
Nexus Fee of:	$2.00	$2,335	$8,806	$8,080	$2,026	$11,351
Nexus Fee of:	$4.00	$2,135	$8,606	$7,880	$1,826	$11,151
Nexus Fee of:	$6.00	$1,935	$8,406	$7,680	$1,626	$10,951
Nexus Fee of:	$8.00	$1,735	$8,206	$7,480	$1,426	$10,751
Nexus Fee of:	$10.00	$1,535	$8,006	$7,280	$1,226	$10,551
Nexus Fee of:	$15.00	$1,035	$7,506	$6,780	$726	$10,051
Nexus Fee of:	$20.00	$535	$7,006	$6,280	$226	$9,551
Resid. Land Value Per SF Site Area						
No Nexus Fee		$43	$23	$21	$38	$29
Nexus Fee of:	$2.00	$40	$22	$20	$34	$28
Nexus Fee of:	$4.00	$36	$22	$20	$31	$28
Nexus Fee of:	$6.00	$33	$21	$19	$28	$27
Nexus Fee of:	$8.00	$29	$21	$19	$24	$27
Nexus Fee of:	$10.00	$26	$20	$18	$21	$26
Nexus Fee of:	$15.00	$18	$19	$17	$12	$25
Nexus Fee of:	$20.00	$9	$18	$16	$4	$24
Percent Reduction in Residual Land Value						
Nexus Fee of:	$2.00	7.9%	2.2%	2.4%	9.0%	1.7%
Nexus Fee of:	$4.00	15.8%	4.4%	4.8%	18.0%	3.5%
Nexus Fee of:	$6.00	23.7%	6.7%	7.2%	27.0%	5.2%
Nexus Fee of:	$8.00	31.6%	8.9%	9.7%	35.9%	6.9%
Nexus Fee of:	$10.00	39.4%	11.1%	12.1%	44.9%	8.7%
Nexus Fee of:	$15.00	59.2%	16.7%	18.1%	67.4%	13.0%
Nexus Fee of:	$20.00	78.9%	22.2%	24.2%	89.9%	17.3%

Source: David Paul Rosen & Associates

Table 22
VacantCommercial and Industrial Land Sales
City of Long Beach
January 1, 2002 - February 15, 2003

No.	Zip Code	Address	Parcel No.	Sale Date	Zoning	Total Sales Price	Lot Size (Sq. Ft.)	Price Per Sq. Ft.
Commercial								
1	N/A	N/A	7432-021-016	2/13/03	CH	$405,000	9,992	$40.53
2	90805	5564 Atlantic Ave.	7127-009-007	2/13/03	CO	$104,545	4,400	$23.76
3	90805	4835 Long Beach Blvd.	7133-032-019	1/28/02	CC	$229,000	4,207	$54.43
4	90806	100 W. Willow St.	7205-006-023	2/11/02	CC	$920,000	23,522	$39.11
5	90802	2 8th Place	7265-008-139	8/30/02	PD1	$444,000	14,296	$31.06
6	90813	1760 Long Beach Blvd.	7269-020-041	6/28/02	PD29	$176,000	12,149	$14.49
7	90813	225 E. 12th St.	7273-003-013	1/29/03	PD29	$115,000	8,500	$13.53
8	N/A	N/A	7274-013-007	1/28/03	CO	$165,000	5,998	$27.51
9	N/A	N/A	7281-014-008	11/15/02	PD30	$89,000	3,746	$23.76
10	N/A	N/A	7432-001-018	7/3/02	CH	$59,000	3,899	$15.13
			Bottom of Range					$13.53
			Top of Range					$54.43
			Average					$28.33
			Median					$25.63
Industrial								
1	90807	2121 E. Cover St.	7149-004-028	6/21/02	IM	$386,500	32,200	$12.00
2	N/A	N/A	7429-003-026	4/23/02	IM	$70,000	3,128	$22.38
3	N/A	N/A	7429-021-021,-022	5/24/02	IG	$60,000	6,500	$9.23
4	N/A	N/A	7429-026-015	2/6/03	IG	$200,000	3,128	$63.94
5	90813	1700 Sante Fe Ave.	7432-007-021	2/1/02	IM	$950,000	14,988	$63.38
			Bottom of Range					$9.23
			Top of Range					$63.94
			Average					$34.19
			Median					$22.38

Source: Dataquick Information Systems; David Paul Rosen & Associates

Table 23
Vacant Commercial and Planned Development Zoned Land
Appraisal Market Comparables and Value Estimates
City of Long Beach

No.	Location	Sale Date	Zoning	Total Sales Price/Value	Lot Size (Sq. Ft.)	Price Per Sq. Ft.
Appraisal For: 1970 and 2085 Atlantic Ave. (1)						
	Market Comparables:					
1	S. Side PCH; 150' W. of Atlantic Ave.	Mar-00	CHW	$60,000	5,499	$10.91
2	NEC Atlantic Ave./Willow St.	Oct-04	CG	$675,000	34,811	$19.39
3	N. Side Anaheim St.; 90' W. of Raymond Ave.	Jan-02	CO	$202,500	12,150	$16.67
4	N. Side Anaheim St.; 45' W. of Raymond Ave.	Feb-02	CO	$115,000	6,075	$18.93
5	E. Side Long Beach Blvd.; 40' N. of Esther St.	Aug-02	PD29	$176,000	12,140	$14.50
6	SEC Locust Ave./14th St.	Jun-02	PD29	$684,000	51,230	$13.35
	Estimate of Value, 2085 Atlantic Ave.		PD25	$255,000	15,000	$17.00
	Estimate of Value, 1970 Atlantic Ave.		PD25	$96,000	6,000	$16.00
Appraisal For: 1865, 1908 and 1910 Long Beach Blvd. and 333 E. Dayman St.(2)						
Market Comparables:						
1	101 W. Pacific Coast Hwy.	Listing	CH	$399,000	18,300	$21.80
2	1760 Long Beach Blvd.	6/28/02	PD	$176,000	12,149	$14.49
3	1517 Lonb Beach Blvd.	Listing	PD	$239,968	14,998	$16.00
4	2086 Lewis Avenue	3/13/02	R1	$52,500	5,300	$9.91
5	1242 E. Pacific Coast Hwy.	11/29/01	CH	$1,500,000	50,547	$29.68
6	3000 E. Pacific Coast Hwy.	2/28/02	CH	$275,000	11,240	$24.47
7	3565 N. Los Coyotes Diag.	2/7/02	CCA	$532,000	21,570	$24.66
8	5033-71 Long Beach Blvd.	2/4/02	CCA	$3,650,000	202,554	$18.02
9	413 E. Sunset Street	5/10/02	R1	$45,000	2,247	$20.03
Estimate of Value, 1908 and 1910 Long Beach Blvd.			PD29	$200,000	13,500	$14.81
Estimate of Value, 1865 Long Beach Blvd. and 333 E. Dayman St.			PD29	$750,000	43,650	$17.18
Land Value Study for Parcels in West Gateway District (3)						
Parcels:						
1	N. Side of W. 3rd b/w Golden Ave. and Maine Ave.		PD30	$945,000	47,250	$20.00
2	N. Side of W. 3rd b/w Maine Ave. and Daisy Ave.		PD30	$992,250	47,250	$21.00
3	W. Side of Daisy Ave., S. of W. 4th St.		PD30	$405,000	22,500	$18.00
4	E. Side of Daisy Ave., S. of W. 4th St.		PD30	$540,000	30,000	$18.00
5	E. Side of Daisy Ave., N. of W. 3rd St.		PD30	$345,000	15,000	$23.00
6	NEC Magnolia Ave./W. 3rd St.		PD30	$328,125	13,125	$25.00
7	NWC Magnolia Ave./W. 3rd St.		PD30	$803,400	30,900	$26.00
8	NWC Chestnut Ave./W. 3rd St.		PD30	$405,000	15,000	$27.00
9	B/w Maine Ave/Daisy Ave./W. 3rd St./W. Broadway		PD30	$2,608,200	113,400	$23.00
10	B/w Magnolia Ave/Daisy Ave./W. 3rd St./W. Broadway		PD30	$2,937,600	122,400	$24.00
11	B/w Magnolia Ave/Chestnut Ave./W. 3rd St./W. Broadway		PD30	$2,782,000	111,280	$25.00
12	NWC W. Broadway/Cedar Ave.		PD30	$675,000	22,500	$30.00
Total/Average				$13,766,575	590,605	$23.31
Restricted Appraisal Study, Properties in American Marketplace Project Area (4)						
Properties:						
1	217 E. 12th St.			$170,000	8,500	$20.00
2	225 E. 12th St.			$170,000	8,500	$20.00
3	1223-27 Long Beach Blvd.			$450,000	22,560	$19.95
4	1095 Long Beach Blvd.			$250,000	12,650	$19.76
5	1112-1130 Locust Ave.			$445,000	22,200	$20.05
6	923-927 Long Beach Blvd.			$300,000	15,000	$20.00
Total/Average				$1,785,000	89,410	$19.96

(1) Appraisal by R.P. Laurain & Associates, date of value March 28, 2003.
(2) Appraisal by Ryon Associates, date of value October 3, 2002.
(3) Land value study by R.P. Laurain & Associates, date of value March 1, 2002.
(4) Restricted appraisal study by R.P. Laurain & Associates, date of value January 27, 2003.

Source: City of Long Beach; David Paul Rosen & Associates

C. Rent and Return Analysis

1. Methodology and Assumptions

DRA calculated the increase in rents, or decrease in the rate of return on investor equity, required to finance the fee at current market terms for both debt and equity financing. By applying the average financing cost to the fee at illustrative fee levels, we determine the rent increase necessary to keep returns to developers and investors constant. Alternatively, we calculate the decrease in the rate of return on equity to investors assuming rents remain constant.

Total development costs for non-residential construction are typically financed through a combination of debt and equity financing. We have assumed a loan to value ratio of 60 percent for the first position mortgage. Current interest rates on debt financing are approximately 8 percent or less for commercial real estate mortgages. We expect rates on debt to remain constant in the short term Actions by the Federal Reserve are most effective in influencing short-term interest rates. Commercial mortgage rates are generally more sensitive than 30-year home mortgage rates, because of their shorter terms of 10 to 15 years.

For this analysis, we have assumed that equity would comprise the other 40 percent of sources used to finance total development costs. We have provided for a 15 percent return on equity, which is higher than current returns on real estate investment trusts (REITs). Based on DRA's substantial experience with REITs, recent returns are generally in the 12 percent to 14 percent range. The Wall Street Journal recently reported actual REIT returns in the 12 percent range before losses.

The average financing cost of capital based on an 8 percent interest rate for a 60 percent loan-to-value mortgage and a 15 percent return on equity for the remaining 40 percent of sources is approximately 11 percent.[6] To be conservative and allow for fluctuations in returns on debt and equity, we have assumed an average financing cost of 12 percent.

After calculating the increase in rents required to finance the commercial development impact fee at illustrative levels, we calculated the increase in rents as a percentage of current market rents. We use the percentage increase in rents required to finance the as a primary measure of the magnitude of the impact of the fee. As a secondary measure, our evaluation also examines the fee at alternative levels as a percentage of total development costs for each land use.

The income and cost assumptions for each prototype are the same used in the land residual analysis above. Total development costs were estimated by adding the construction costs for each prototype from Table 19 to the market residual land values from Table 20.

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[6] To the extent that mezzanine debt is used to finance a portion of the development cost, the actual cost of capital will be lower than estimated. Interest rates on mezzanine debt are typically in between rates on first position debt and equity.

2. Findings

The development cost, rent and return analyses were performed on a per square foot basis for each land use and for illustrative fee levels ranging from $2.00 per square foot to $10.00 per square foot. **Table 24** summarizes the findings of the rent analysis. **Table 25** summarizes the findings of the return analysis.

Table 24
DEVELOPMENT COST AND RENT ANALYSIS
CITY OF LONG BEACH COMMERCIAL DEVELOPMENT IMPACT FEE
ECONOMIC IMPACT ANALYSIS

2003

	Office	Big Box Retail	Community Retail	Hotel	Light Manufacturing
DEVELOPMENT COST ANALYSIS					
Development Cost Per SF, Excluding Land	$224	$110	$145	$197	$115
Plus: Land Cost Per SF	$15	$15	$15	$15	$12
Total Development Cost Per SF	$239	$125	$160	$212	$127
Linkage Fee As % of Development Cost					
At a Per Square Foot Fee of:					
$2.00	0.84%	1.60%	1.25%	0.94%	1.57%
$4.00	1.67%	3.20%	2.50%	1.89%	3.15%
$6.00	2.51%	4.80%	3.75%	2.83%	4.72%
$8.00	3.35%	6.40%	5.00%	3.77%	6.30%
$10.00	4.18%	8.00%	6.25%	4.72%	7.87%
$15.00	6.28%	12.00%	9.38%	7.08%	11.81%
$20.00	8.37%	16.00%	12.50%	9.43%	15.75%
RENT ANALYSIS					
Annual Gross Rent/Income Per Sq. Ft.	$24.00	$20.00	$26.00	$64.73	$23.00
Average Occupancy Rate	95%	100%	95%	70%	100%
Increase in Annual Rent Per SF Required to Finance					
Linkage Fee Per Square Foot of (2) :					
$2.00	$0.16	$0.15	$0.16	$0.22	$0.15
$4.00	$0.32	$0.30	$0.32	$0.43	$0.30
$6.00	$0.48	$0.46	$0.48	$0.65	$0.46
$8.00	$0.64	$0.61	$0.64	$0.87	$0.61
$10.00	$0.80	$0.76	$0.80	$1.09	$0.76
$15.00	$1.20	$1.14	$1.20	$1.63	$1.14
$20.00	$1.60	$1.52	$1.60	$2.17	$1.52
% Increase in Annual Rent Per SF					
at Linkage Fee Per Square Foot of:					
$2.00	0.67%	0.76%	0.62%	0.34%	0.66%
$4.00	1.33%	1.52%	1.23%	0.67%	1.32%
$6.00	2.00%	2.28%	1.85%	1.01%	1.98%
$8.00	2.67%	3.04%	2.46%	1.34%	2.64%
$10.00	3.33%	3.80%	3.08%	1.68%	3.30%
$15.00	5.00%	5.70%	4.62%	2.52%	4.96%
$20.00	6.67%	7.60%	6.15%	3.35%	6.61%

(1) Financing assumptions:

Debt:	
Loan to Value Ratio	60.00%
Debt Interest Rate	8.00%
Equity	
% of Develop. Costs	40.00%
Equity Yield	7.00%
Current Average Financing Cost	7.60%
Assumed Average Financing Cost	7.60%

(2) Equals linkage fee per square foot times assumed average cost of capital divided by occupancy rate.

Source: David Paul Rosen & Associates

Table 25
RATE OF RETURN ANALYSIS
CITY OF LONG BEACH COMMERCIAL DEVELOPMENT IMPACT FEE
ECONOMIC IMPACT ANALYSIS

2003

	Office	Big Box Retail	Community Retail	Hotel	Light Manufacturing
RETURN ANALYSIS					
Original Equity Investment Per Sq. Ft. (1)	$95.60	$50.00	$64.00	$84.80	$50.80
Increase in Equity Investment Per Sq. Ft. at Development Impact Fee Per Square Foot of: (2)					
$2.00	$2.00	$2.00	$2.00	$2.00	$2.00
$4.00	$4.00	$4.00	$4.00	$4.00	$4.00
$6.00	$6.00	$6.00	$6.00	$6.00	$6.00
$8.00	$8.00	$8.00	$8.00	$8.00	$8.00
$10.00	$10.00	$10.00	$10.00	$10.00	$10.00
$15.00	$15.00	$15.00	$15.00	$15.00	$15.00
$20.00	$20.00	$20.00	$20.00	$20.00	$20.00
Assumed Equity Yield:	8.50%	9.00%	9.00%	9.00%	9.00%
Original Return on Equity Per Sq. Ft. (3)	$8.13	$4.50	$5.76	$7.63	$4.57
Revised Rate of Return on Equity at Development Impact Fee Per Square Foot of: (4)					
$2.00	8.33%	8.65%	8.73%	8.79%	8.66%
$4.00	8.16%	8.33%	8.47%	8.59%	8.34%
$6.00	8.00%	8.04%	8.23%	8.41%	8.05%
$8.00	7.84%	7.76%	8.00%	8.22%	7.78%
$10.00	7.70%	7.50%	7.78%	8.05%	7.52%
$15.00	7.35%	6.92%	7.29%	7.65%	6.95%
$20.00	7.03%	6.43%	6.86%	7.28%	6.46%
Decrease (in Basis Points) in Rate of Return on Equity at Development Impact Fee Per Square Foot of:					
$2.00	17	35	27	21	34
$4.00	34	67	53	41	66
$6.00	50	96	77	59	95
$8.00	66	124	100	78	122
$10.00	80	150	122	95	148
$15.00	115	208	171	135	205
$20.00	147	257	214	172	254
Percentage Decrease in Rate of Return on Equity at Development Impact Fee Per Square Foot of:					
$2.00	2.05%	3.85%	3.03%	2.30%	3.79%
$4.00	4.02%	7.41%	5.88%	4.50%	7.30%
$6.00	5.91%	10.71%	8.57%	6.61%	10.56%
$8.00	7.72%	13.79%	11.11%	8.62%	13.61%
$10.00	9.47%	16.67%	13.51%	10.55%	16.45%
$15.00	13.56%	23.08%	18.99%	15.03%	22.80%
$20.00	17.30%	28.57%	23.81%	19.08%	28.25%

(1) Equals assumed equity yield multiplied by total development cost per square foot (without fee).
(2) Assumes development impact fee is financed 100% through equity, since imposition of fee does not increase debt-carrying capacity of development.
(3) Equals original return on equity per square foot multiplied by assumed equity yield.
(4) Equals original return on equity per square foot divided by the sum of original equity investment per square foot plus increase in equity investment per square foot.

Source: David Paul Rosen & Associates

Appendix A
CITY OF LONG BEACH
ACTIVE MAJOR DEVELOPMENT PROJECTS (1)

	Address/Description	Dwelling Units	Office SF	Retail/ Commercial SF	Hotel Rooms	Industrial/ SF
ENTITLEMENTS GRANTED						
1	201 The Promenade				162	
2	517 E. 1st St.				69	
3	5950 Spring Street 6 Stories		179,000			
4	23 4th Place Condominiums	10				
5	2702 Long Beach Blvd. Medical building		105,800			
6	3400 Long Beach Retail/fast food			8,500		
7	829 Pine Ave. Convert commercial bldg. to lofts	16				
8	5400 Paramount Self-storage					71,536
9	6897 Paramount Self-storage/RV parking					106,636
10	1570-1598 Long Beach Blvd. Commercial building			11,984		
11	835 Locust Avenue Condominiums (adaptive reuse of Masonic Temple and new construction)	82				

Appendix A
CITY OF LONG BEACH
ACTIVE MAJOR DEVELOPMENT PROJECTS (1)

	Address/Description	Dwelling Units	Office SF	Retail/ Commercial SF	Hotel Rooms	Industrial/ SF
12	3570 Atlantic Ave. Drug store/drive-thru			11,550		
13	2005-2011 Long Beach Blvd. Commercial building			15,000		
14	2323 South St. Self-storage					75,100
15	201-205 E. Broadwaty Conversion of Insurance Exchange Bldg.	11				
16	1690-1694 Cota Ave. Industrial building					6,356
17	2001 River Ave. Transitional housing	201				
18	3050 Orange Ave. Self-storage expansion					55,000
19	2760 Atlantic Ave. Medical office		7,200			
20	4085 Atlantic Retail center			5,800		
21	6375 Paramount Blvd. Expansion of industrial facility					40,000
22	2210 Gaylord St. Industrial building					13,700

Appendix A
CITY OF LONG BEACH
ACTIVE MAJOR DEVELOPMENT PROJECTS (1)

	Address/Description	Dwelling Units	Office SF	Retail/ Commercial SF	Hotel Rooms	Industrial/ SF
PRELIMINARY						
23	2080 Obispo Ave. Single-family homes	106				
24	248 Broadway Units over commercial	48				
25	1601 Pacific Ave. Apartments w/ density bonus	42				
26	6000 Loynes Condominiums	35				
27	120 Studebaker Shopping Center			N/A		
28	3918-3926 Long Beach Blvd. Commercial/fast food			8,886		
29	712 W. Baker St. Self-storage					519,135
30	6400 Pacific Coast Hwy. Residential development	302				
31	6400 Pacific Coast Hwy. Hotel				199	
32	1422 W. Willow St. Shopping center			5,750		
33	3401 Golden Ave. Self-storage					26,000
34	4101 Bellflower Blvd. Commercial building			9,000		

Appendix A
CITY OF LONG BEACH
ACTIVE MAJOR DEVELOPMENT PROJECTS (1)

	Address/Description	Dwelling Units	Office SF	Retail/ Commercial SF	Hotel Rooms	Industrial/ SF
35	225 E. 12th St. Residential building	5				
36	1000 E. Spring St. Sports park					
37	200 E. Broadway 5 story mixed use	200				
38	640 Long Beach Blvd. McDonald's/Walgreen's					
39	200 Long Beach Blvd. Artist's complex					
40	2200 W. Pacific Coast Hwy. Warehouse					
41	2201 Lakewood Retail/office					
42	110 West Ocean Blvd. Historic rehab./mixed use	45				
43	3339 E. Anaheim St. Walgreen's					
44	901 E. Artesia Shopping center					
45	25 S. Chestnut St. Mixed-use high rise (Camden)					
46	6108 Atlantic Ave. Commercial center					

Appendix A
CITY OF LONG BEACH
ACTIVE MAJOR DEVELOPMENT PROJECTS (1)

Address/Description	Dwelling Units	Office SF	Retail/ Commercial SF	Hotel Rooms	Industrial/ SF
Entitlements Granted Subtotal	320	292,000	52,834	231	368,328
Preliminary Subtotal	783	0	23,636	199	545,135
TOTAL	1,103	292,000	76,470	430	913,463
Reuse of Existing Bldgs.	154	0	0	0	0

(1) Excludes projects already under construction.

Source: City of Long Beach Major Projects list, March 30, 2003; David Paul Rosen & Associates.

APPENDIX B
SURVEY OF SPECIAL DEVELOPMENT IMPACT FEES CHARGED BY AREA CITIES AND COUNTIES
BY LAND USE

Data as of 2/18/03

CITY	RETAIL	RESIDENTIAL	OFFICE Class A Constr	HOTEL	RESTAURANT	WAREHOUSE/ LIGHT MFG
Long Beach	**1. Trans & Improv Fee:** $3.00 psf **2. Sewer Capacity Fee:** $66.09 per "equivalent fixture unit (EFU)": $2,181 **3. Art in Public Places Fee:** 1% of constr value & land cost for any Redev assisted project. Note: Does not apply if assisted by Hsg Setaside funds **4. School Dist Fee:** $0.34 psf **Note:** Downtown comm'l fees are higher ***TOTAL COSTS 50,000 SF PROJECT: $199,831***	**1. Trans & Improv Fee:** $1,125 pdu Seniors: $664 pdu 2nd Unit: $664 pdu **2. Parks & Rec Fee:** SFU: $2,660 pdu MFU: $2,070 pdu 2nd Units: $1,522 pdu **3. Sewer Capacity Fee:** $66.09 per "equivalent fixture unit (EFU)" **4. Bluff Park Beach Access Fee:** 1/2 of 1% of construction value **5. Art in Public Places Fee:** 1% of constr value & land cost for any Redev assisted project. Note: Does not apply if assisted by Hsg Setaside funds **6. School Dist Fee:** $2.14 psf	**1. Trans & Improv Fee:** $2.00 psf **2. Sewer Capacity Fee:** $66.09 per "equivalent fixture unit (EFU)": $7,733 **3. Art in Public Places Fee:** 1% of constr value & land cost for any Redev assisted project. Note: Does not apply if assisted by Hsg Setaside Funds **4. School Dist Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $161,633***	**1. Trans & Improv Fee:** $750 per guest room **2. Sewer Capacity Fee:** $66.09 per "equivalent fixture unit (EFU)": $56,243 **3. Art in Public Places Fee:** 1% of constr value & land cost for any Redev assisted project. Note: Does not apply if assisted by Hsg Setaside funds. **4. School Dist Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $171,152***	**1. Sewer Capacity Fee:** $66.09 per "equivalent fixture unit (EFU)": $10,640 **2. Art in Public Places Fee:** 1% of constr value and land cost for any Redev assisted project. Note: Does not apply if assisted by Hsg Setaside funds. **3. School Dist Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $74,691***	**1. Trans & Improv Fee: $1.10 psf (Self-storage fee: $0.29 psf** **2. Sewer Capacity Fee:** $66.09 per "equivalent fixture unit (EFU)": $2,677 **3. Art in Public Places Fee:** 1% of constr value & land cost for any Redev assisted project. Note: Does not apply if assisted by Hsg Setaside funds. **4. School Dist Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $90,477***
Pasadena ***City has Inclusionary Housing Ordinance***	**1. Construction Tax:** 1.92% of valuation **2. Commercial Fee:** $2.93 psf. for 2000+ sf **3. Art in Public Places:** 1% of valuation depending on type, location & size. **4. School Dist Fee:** $ .33 psf. ($ .32 psf. for auto repair) ***TOTAL COSTS 50,000 SF PROJECT: $279,800***	**1. Residential Impact Fee:** $756 per dwelling unit **2. Construction Tax:** 1.92% of cons valuation **3. Inclusionary Hsg Fee; city divided into 4 areas; fee charged for res only, both rental & for sale hsg. and for 10+ units only; 15% affordable housing or payment of in lieu fee:** Rental: Area A, amount determined case by case; Area B, no fee; Area C, 10-49 units $7 psf, 50+ units $10 psf; Area D, 10-49 units $10 psf, 50+ units $15 psf. For Sale: Area A, 10-49 units $10 psf, 50+ units $14 psf; Area B, no fee; Area C, 10-49 units $1 psf, 50+ units $2 psf; Area D, 10-49 units $5 psf, 50+ units $7 psf **3. Art in Public Places:** 1% of valuation depending on type, location & size **4. School Dist. Fee:** $2.05 psf for 500+ sf only	**1. Construction Tax:** 1.92% of valuation **2. Commercial Fee:** $2.93 psf. for 2000+ sf **3. Art in Public Places:** 1% of valuation depending on type, location & size. **4. School Dist Fee:** $ .33 psf. ($ .32 psf. for auto repair) ***TOTAL COSTS 50,000 SF PROJECT: $320,680***	**1. Construction Tax:** 1.92% of valuation **2. Commercial Fee:** $2.93 psf. for 2000+ sf **3. Art in Public Places:** 1% of valuation depending on type, location & size. **4. School Dist Fee:** $ .33 psf. ($ .32 psf. for auto repair) ***TOTAL COSTS 50,000 SF PROJECT: $355,720***	**1. Construction Tax:** 1.92% of valuation **2. Commercial Fee:** $2.93 psf. for 2000+ sf **3. Art in Public Places:** 1% of valuation depending on type, location & size. **4. School Dist Fee:** $ .33 psf. ($ .32 psf. for auto repair) ***TOTAL COSTS 50,000 SF PROJECT: $358,640***	**1. Construction Tax:** 1.92% of valuation **2. Commercial Fee:** $2.93 psf. for 2000+ sf **3. Art in Public Places:** 1% of valuation depending on type, location & size. **4. School Dist Fee:** $ .33 psf. ($ .32 psf. for auto repair) ***TOTAL COSTS 50,000 SF PROJECT: $291,480***

APPENDIX B
SURVEY OF SPECIAL DEVELOPMENT IMPACT FEES CHARGED BY AREA CITIES AND COUNTIES
BY LAND USE
Data as of 2/18/03

CITY	RETAIL	RESIDENTIAL	OFFICE Class A Constr	HOTEL	RESTAURANT	WAREHOUSE/ LIGHT MFG
Los Angeles *(City)*	**1. Central City Specific Plan transportation fee:** $17,000 per 'trip.' Exempts all residential & local-serving developments. **2. Warner Center Spec. Plan trans fee:** $4000 per 'trip.' Exempts SFD & local-serving development. **3. Ventura Blvd Corridor Spec Plan:** $2000 per 'trip.' Exempts SFD & local-serving development. **4. West L.A. Traffic Impact Mitigation Program:** $3000 per 'trip.' Exempts SFD & local-serving development. **5. L.A. Coastal Corridor Spec Plan:** $5000 per 'trip.' Exempts SFD & local-serving development. **6. Art in Public Places - applies only to projects over $500,000 in value:** Fee: 1% of value or $ .39 to $1.57 psf **7. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02: Commercial:** $ .33 psf. **Pkg Structure:** $ .09 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$56,500 plus transportation fees*** ***$61,000 w/pkg structure***	**1. Residential Impact Fee; no threshold. Fee: $500 pdu 2. Parks Impact Fee for subdivisions & condos (Quimby): varies depending on loc in 30 zones; developer can provide land in lieu of fee: Range: $992 pdu - $6,243 pdu 3.Parks Impact Fee (non-Quimby): $200 pdu 4. Warner Center Specific Plan Transportation Fee $4000 per 'trip.' Exempts SFD & local-serving development. 5. Ventura Blvd. Corridor Spec Plan trans fee: $2000 per 'trip.' Exempts SFD & local-serving development. 6. West L.A. Traffic Impact Mitigation Prog.: $3000 per 'trip.' Exempts SFD & local-serving development. 7. L.A. Coastal Corridor Spec Plan: $5000 per 'trip.' Exempts SFD & local-serving development. 8. Art in Public Places; applies only to projects over $500,000. Fee: 1% of value or $ .39 or $1.57 psf 9. School Dist. Fee as of 9/25/02. Request**	**1. Central City Specific Plan transportation fee:** $17,000 per 'trip.' Exempts all residential & local-serving developments. **2. Warner Center Spec. Plan trans fee:** $4000 per 'trip.' Exempts SFD & local-serving development. **3. Ventura Blvd Corridor Spec Plan:** $2000 per 'trip.' Exempts SFD & local-serving development. **4. West L.A. Traffic Impact Mitigation Program:** $3000 per 'trip.' Exempts SFD & local-serving development. **5. L.A. Coastal Corridor Spec Plan:** $5000 per 'trip.' Exempts SFD & local-serving development. **6. Art in Public Places - applies only to projects over $500,000 in value:** Fee: 1% of value or $ .39 to $1.57 psf **7. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02: Commercial:** $ .33 psf. **Pkg Structure:** $ .09 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$70,500, plus transportation fees*** ***$75,000 w/pkg structure***	**1. Central City Specific Plan transportation fee:** $17,000 per 'trip.' Exempts all residential & local-serving developments. **2. Warner Center Spec. Plan trans fee:** $4000 per 'trip.' Exempts SFD & local-serving development. **3. Ventura Blvd Corridor Spec Plan:** $2000 per 'trip.' Exempts SFD & local-serving development. **4. West L.A. Traffic Impact Mitigation Program:** $3000 per 'trip.' Exempts SFD & local-serving development. **5. L.A. Coastal Corridor Spec Plan:** $5000 per 'trip.' Exempts SFD & local-serving development. **6. Art in Public Places - applies only to projects over $500,000 in value:** Fee: 1% of value or $ .39 to $1.57 psf **7. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02: Commercial:** $ .33 psf. **Pkg Structure:** $ .09 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$82,500 plus "per trip" fees*** ***$87,000 w/pkg structure***	**1. Central City Specific Plan transportation fee:** $17,000 per 'trip.' Exempts all residential & local-serving developments. **2. Warner Center Spec. Plan trans fee:** $4000 per 'trip.' Exempts SFD & local-serving development. **3. Ventura Blvd Corridor Spec Plan:** $2000 per 'trip.' Exempts SFD & local-serving development. **4. West L.A. Traffic Impact Mitigation Program:** $3000 per 'trip.' Exempts SFD & local-serving development. **5. L.A. Coastal Corridor Spec Plan:** $5000 per 'trip.' Exempts SFD & local-serving development. **6. Art in Public Places - applies only to projects over $500,000 in value:** Fee: 1% of value or $ .39 to $1.57 psf **7. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02: Commercial:** $ .33 psf. **Pkg Structure:** $ .09 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$83,500 plus transportation fees*** ***$88,000 w/pkg structure***	**1. Central City Specific Plan transportation fee:** $17,000 per 'trip.' Exempts all residential & local-serving developments. **2. Warner Center Spec. Plan trans fee:** $4000 per 'trip.' Exempts SFD & local-serving development. **3. Ventura Blvd Corridor Spec Plan:** $2000 per 'trip.' Exempts SFD & local-serving development. **4. West L.A. Traffic Impact Mitigation Program:** $3000 per 'trip.' Exempts SFD & local-serving development. **5. L.A. Coastal Corridor Spec Plan:** $5000 per 'trip.' Exempts SFD & local-serving development. **6. Art in Public Places - applies only to projects over $500,000 in value:** Fee: 1% of value or $ .39 to $1.57 psf **7. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02: Commercial:** $ .33 psf. **Pkg Structure:** $ .09 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$60,500, plus transportation fees*** ***$65,000 w/pkg structure***
Glendale	**1. Energy Check Fee/ Conservation (Title 24):** 10% of Permit Fee. **2. Disabled Access Fee (Title 24):** 10% of Permit Fee. **3. School Fee:** $ .34 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$59,800***	**1. Strong Motion Fee:** $1 per $1000 of construction cost. **2. Energy Check Fee/ Conservation (Title 24):** 10% of Permit Fee. **3.Disabled Access Fee (Title 24):** 10% of Permit Fee. **4. School Fee:** $2.14 psf	**1. Energy Check Fee/ Conservation (Title 24):** 10% of Permit Fee. **2. Disabled Access Fee (Title 24):** 10% of Permit Fee. **3. School Fee:** $ .34 psf TOTAL COSTS 50,000 SF PROJECT: ***$52,200***	**1. Energy Check Fee/ Conservation (Title 24):** 10% of Permit Fee. **2. Disabled Access Fee (Title 24):** 10% of Permit Fee. **School Fee:** $ .34 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$50,700***	**1. Energy Check Fee/ Conservation (Title 24):** 10% of Permit Fee. **2. Disabled Access Fee (Title 24):** 10% of Permit Fee **3. School Fee:** $ .34 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$66,300***	**1. Energy Check Fee/ Conservation (Title 24):** 10% of Permit Fee. **2. Disabled Access Fee (Title 24):** 10% of Permit Fee **3. School Fee:** $ .34 [sf *TOTAL COSTS 50,000 SF PROJECT:* ***$34,600***
Santa Monica	**1. School Fee:** $ .31 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$15,500***	**1. Affordable Housing Obligation for MF Development** (a) $6.14 psf for apartments (b) $11.01 psf for condos **2. Parks Fee:** $200 pdu **3. School Fee:** $1.93 psf	**1. Office Mitigation Fees (fees allocated to affordable housing & park development)** (a) $3.84 psf for office space under 15,000 sf (b) $8.53 psf for office space over 15,000 sf **2. School Fee:** $ .31 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$442,000***	**1. School Fee:** $ .31 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$15,500***	**1. School Fee:** $ .31 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$15,500***	**1. School Fee:** $ .31 psf *TOTAL COSTS 50,000 SF PROJECT:* ***$15,500***

APPENDIX B
SURVEY OF SPECIAL DEVELOPMENT IMPACT FEES CHARGED BY AREA CITIES AND COUNTIES
BY LAND USE
Data as of 2/18/03

CITY	RETAIL	RESIDENTIAL	OFFICE Class A Constr	HOTEL	RESTAURANT	WAREHOUSE/ LIGHT MFG
Carson	**1. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** **Commercial:** $ .33 psf. **Pkg Structure:** $ .09 psf ***TOTAL COST 50,000 SF PROJECT: $16,500*** ***$21,000 w/pkg structure***	**1. Parks Fee (Quimby Act):** SF Detached: $4,218 pdu SF Attached: $4,161 pdu MF 2-4 units: $3,730 pdu MF 5+ units: $3,044 pdu **2. School Dist. Fee as of 9/25/02. Request to increase 10/8/02:** $2.05 psf	**1. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** **Commercial:** $ .33 psf. **Pkg Structure:** $ .09 psf ***TOTAL COST 50,000 SF PROJECT: $16,500*** ***$21,000 w/pkg structure***	**1. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** **Commercial:** $ .33 psf. **Pkg Structure:** $ .09 psf ***TOTAL COST 50,000 SF PROJECT: $16,500*** ***$21,000 w/pkg structure***	**1. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** $ .33 psf ***TOTAL COSTS 50,000 SF PROJECT: $16,500***	**1. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** $ .33 psf (Self-storage: $ .27 psf) ***TOTAL COSTS 50,000 SF PROJECT: $16,500*** ***$13,500 SELF STORAGE***
Santa Ana	**1. Trans Improvement Fee:** Range: $1.81 to $5.50 psf **2. Trans. Corridor Fee:** $3.30 psf for Foothill-Eastern $3.63 psf for San Joaquin **3. Orange Co. Sanitation Fee:** Low Demand: $ .11 psf Aver Demand (office): $ .675 psf High Demand (restrnt): $1.60 psf **4. Sewer Impact Fee:** Basic fee: $65.85 (multiplied by no. of units depending on usage (laundromat, carwash) **5. Storm Drainage Assmt Fee:** Range from $2875.50 to $5340.98 per acre **6. Fire Facilities Fee (comm'l only):** $ .043 psf 7. **School Fee:** $ .33 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $514,241 plus Sewer Impact Fees***	**1. Trans. Improvement Fee:** For 5+ units only Fee varies by 6 designated areas -SFD: $1.80 psf living area -MF: $1.10 psf living area **2. Trans. Corridor Fee:** -SFD: $2910 pdu Foothill -SFD: $2842 pdu San Joaquin -MF: $1694 pdu Foothill -MF: $1659 pdu San Joaquin **3. Orange Co Sanitation Fee:** Residential varies based on bedroom size -SFD: $1130 - $2350 pdu -MF: $$580 - $1965 pdu **4. Sewer Impact Fee:** Varies depending on water usage. -Commercial & Residential: Basic fee: $65.85. However, basic fee is multiplied by # of "fixture units" based on usage, e.g., car wash is 80 units x $65.85. **5. Storm Drainage Assmt Fee:** Varies based on land acreage & by location in 1 of 6 designated areas -Commercial & Residential: range $2875.50 - $5340.98 per acre. **6. Park Acq & Dev Fee (residential only):** 1 br $1460, 2 br $1945, 3 br $2610; 4 br $2890, 5+ br $3215	**1. Trans Improvement Fee:** Range: $1.81 to $5.50 psf **2. Trans. Corridor Fee:** $3.30 psf for Foothill-Eastern $3.63 psf for San Joaquin **3. Orange Co. Sanitation Fee:** Low Demand: $ .11 psf Aver Demand (office): $ .675 psf High Demand (restrnt): $1.60 psf **4. Sewer Impact Fee:** Basic fee: $65.85 (multiplied by no. of units depending on usage (laundromat, carwash) **5. Storm Drainage Assmt Fee:** Range from $2875.50 to $5340.98 per acre **6. Fire Facilities Fee (comm'l only):** $ .043 psf 7. **School Fee:** $ .33 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $514,241 plus Sewer Impact Fees***	**1. Trans Improvement Fee:** Range: $1.81 to $5.50 psf **2. Trans. Corridor Fee:** $3.30 psf for Foothill-Eastern $3.63 psf for San Joaquin **3. Orange Co. Sanitation Fee:** Low Demand: $ .11 psf Aver Demand (office): $ .675 psf High Demand (restrnt): $1.60 psf **4. Sewer Impact Fee:** Basic fee: $65.85 (multiplied by no. of units depending on usage (laundromat, carwash) **5. Storm Drainage Assmt Fee:** Range from $2875.50 to $5340.98 per acre **6. Fire Facilities Fee (comm'l only):** $ .043 psf 7. **School Fee:** $ .33 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $560,491 plus Sewer Impact Fees***	**1. Trans Improvement Fee:** Range: $1.81 to $5.50 psf **2. Trans. Corridor Fee:** $3.30 psf for Foothill-Eastern $3.63 psf for San Joaquin **3. Orange Co. Sanitation Fee:** Low Demand: $ .11 psf Aver Demand (office): $ .675 psf High Demand (restrnt): $1.60 psf **4. Sewer Impact Fee:** Basic fee: $65.85 (multiplied by no. of units depending on usage (laundromat, carwash) **5. Storm Drainage Assmt Fee:** Range from $2875.50 to $5340.98 per acre **6. Fire Facilities Fee (comm'l only):** $ .043 psf 7. **School Fee:** $ .33 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $485,991 plus Sewer Impact Fees***
Torrance	**1. Construction Tax:** 1.5% of construction value **2. School Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $77,000***	**1. Parks & Rec Fee:** $550 per unit **2. Dwelling Unit Fee:** $1054 per unit **3. Construction Tax:** *1.50% of construction cost.* **4. Seismic Fee:** $.50 per $1000 of value **5. School Fee:** $2.14 psf (for 500+ sf only)	**1. Construction Tax:** 1.5% of construction value **2. School Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $77,000***	**1. Construction Tax:** 1.5% of construction value **2. School Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $77,000***	**1. Construction Tax:** 1.5% of construction value **2. School Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $77,000***	**1. Construction Tax:** 1.5% of construction value **2. School Fee:** $ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $77,000***

APPENDIX B
SURVEY OF SPECIAL DEVELOPMENT IMPACT FEES CHARGED BY AREA CITIES AND COUNTIES
BY LAND USE
Data as of 2/18/03

CITY	RETAIL	RESIDENTIAL	OFFICE Class A Constr	HOTEL	RESTAURANT	WAREHOUSE/ LIGHT MFG
Carlsbad ***(Has Inclusionary Zoning Ordinance)***)	**1. City Developer Impact Fees:** None **2. School Dist. Fees:**$ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $ 17,000***	**1. 1-6 Units:** 15% of new dwelling units are restricted to low-income affordability. Can provide units or pay a $4,515 fee per unit. **2. 7+ units:** Must actually build units. Not permitted to pay in lieu fees. **3. School Fee:** $2.14 psf	**1. City Developer Impact Fees:** None **2. School Dist. Fees:**$ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $ 17,000***	**1. City Developer Impact Fees:** None **2. School Dist. Fees:**$ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $ 17,000***	**1. City Developer Impact Fees:** None **2. School Dist. Fees:**$ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $ 17,000***	**1. City Developer Impact Fees:** None **2. School Dist. Fees:**$ .34 psf ***TOTAL COSTS 50,000 SF PROJECT: $ 17,000***
Los Angeles County	**1. Santa Clarita only - Bridge & Major Thoroughfare Fee:** Range: $2,700 - $14,700 **2. Fire Services Impact Fee:** $ .18 psf **3. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** Commercial: $ .33 psf. Pkg Structure: $ .09 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $40,200*** ***Up to $44,700 w/pkg structure***	**1. Santa Clarita only - Bridge & Major Thoroughfare Fee:** Range: $2,700 - $14,700 **2. Library Services Impact Fee. Varies depending on location in 7 different areas. No threshold. Raised annually based on CPI:** Range: $640 - $648 pdu **3. Parks & Rec Fee:** $2,410 per dwelling unit **4. Fire Services Impact Fee:** $ .18 psf **5. School Dist. Fee as of 9/25/02. Request to increase on 10/8/02:** Residential: $2.05 psf Pkg Structure: $ .09 psf	**1. Santa Clarita only - Bridge & Major Thoroughfare Fee:** Range: $2,700 - $14,700 **2. Fire Services Impact Fee:** $ .18 psf **3. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** Commercial: $ .33 psf. Pkg Structure: $ .09 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $40,200*** ***Up to $44,700 w/pkg structure***	**1. Santa Clarita only - Bridge & Major Thoroughfare Fee:** Range: $2,700 - $14,700 **2. Fire Services Impact Fee:** $ .18 psf **3. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** Commercial: $ .33 psf. Pkg Structure: $ .09 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $40,200*** ***Up to $44,700 w/pkg structure***	**1. Santa Clarita only - Bridge & Major Thoroughfare Fee:** Range: $2,700 - $14,700 **2. Fire Services Impact Fee:** $ .18 psf **3. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02:** Commercial: $ .33 psf. Pkg Structure: $ .09 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $40,200*** ***Up to $44,700 w/pkg structure***	**1. Santa Clarita only: Bridge & Major Thoroughfare fee:** Range: $2,700 - $14,700 **2. Fire Services Impact Fee:** $ .18 psf **3. School Dist. Fee as of 9/25/02. Request to increase on 12/9/02: Indus/Mfg:** $ .33 psf **Self-storage:** $ .27 psf ***TOTAL COSTS 50,000 SF PROJECT: Up to $40,200*** ***__ or*** ***Up to $28,200, if self-storage***
Orange County (Total costs were not calculated because of variety of areas and dissimilarity to Long Beach.)	1. Major Thoroughfare & Bridge Fee Program. Fees vary depending on location in multiple areas, & zones within areas. For SF and MF res, fee is pdu., & there is no threshold. For non-residential, fee is psf. All but 2 fees go to Orange County. 2 of the fees go to the Trans Corridor Agency. Ranges of fees are so varied that a fee schedule is attached to survey. 2. Orange Co. Fire Authority Fee - Varies by 8 areas: $6.21 to $38.32 psf for non-res.	**1. Major Thoroughfare & Bridge Fee Program.** Fees vary depending on location in multiple areas, & zones within areas. For SF and MF res, fee is pdu., & there is no threshold. For non-residential, fee is psf. All but 2 fees go to Orange County. 2 of the fees go to the Trans Corridor Agency. Ranges of fees are so varied that a fee schedule is attached to survey. **2. Library Fee (for res. only.)** Fee sufficient to cover costs of svcs. provided by library system & only for large projects. 1/2 sf. per capita of constr cost AND 1.5 books per capita. **3. Orange Co. Fire Authority fee; varies in 8 areas.** Range for residential: $63 pdu to $392 pdu.	**1. Major Thoroughfare & Bridge Fee Program.** Fees vary depending on location in multiple areas, & zones within areas. For SF and MF res, fee is pdu., & there is no threshold. For non-residential, fee is psf. All but 2 fees go to Orange County. 2 of the fees go to the Trans Corridor Agency. Ranges of fees are so varied that a fee schedule is attached to survey. **2. Orange Co. Fire Authority Fee - Varies by 8 areas:** $6.21 to $38.32 psf for non-res.	**1. Major Thoroughfare & Bridge Fee Program.** Fees vary depending on location in multiple areas, & zones within areas. For SF and MF res, fee is pdu., & there is no threshold. For non-residential, fee is psf. All but 2 fees go to Orange County. 2 of the fees go to the Trans Corridor Agency. Ranges of fees are so varied that a fee schedule is attached to survey. **2. Orange Co. Fire Authority Fee - Varies by 8 areas:** $6.21 to $38.32 psf for non-res.	**1. Major Thoroughfare & Bridge Fee Program.** Fees vary depending on location in multiple areas, & zones within areas. For SF and MF res, fee is pdu., & there is no threshold. For non-residential, fee is psf. All but 2 fees go to Orange County. 2 of the fees go to the Trans Corridor Agency. Ranges of fees are so varied that a fee schedule is attached to survey. **2. Orange Co. Fire Authority Fee - Varies by 8 areas:** $6.21 to $38.32 psf for non-res.	**1. Major Thoroughfare & Bridge Fee Program.** Fees vary depending on location in multiple areas, & zones within areas. For SF and MF res, fee is pdu., & there is no threshold. For non-residential, fee is psf. All but 2 fees go to Orange County. 2 of the fees go to the Trans Corridor Agency. Ranges of fees are so varied that a fee schedule is attached to survey. **2. Orange Co. Fire Authority Fee - Varies by 8 areas:** $6.21 to $38.32 psf for non-res.